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**CONSERVING
IFUGAO RICE TERRACES
AS SATOYAMA LANDSCAPE**



Youth Capacity Building and Exchange Program towards Sustainable Development and Conservation of Ifugao Rice Terraces

Ifugao Rice Terraces as Satoyama Landscape Book Series

CONSERVING IFUGAO RICE TERRACES AS A SATOYAMA LANDSCAPE

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Conserving the Ifugao Rice Terraces as a Satoyama Landscape

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This book is part of the Ifugao Rice Terraces as Satoyama Landscape Book Series

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FOREWORD

This book is part of the Ifugao Rice Terraces as Satoyama Landscape Book Series, and is in support of the two United Nations 2015 Sustainable Development Goals (SDG):

- SDG 13: Take urgent action to combat climate change and its impacts; and
- SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

Satoyama, a Japanese term that has taken global significance, is a framework that highlights human-nature interaction. In a satoyama landscape, human-nature interaction is expected to be at its best because there is harmony, there is no destruction, there is sustainability, and there is resiliency (Buot, 2017). This interaction is evident in the daily living of people relying heavily on the goods and services provided by the environment. Studying and understanding the individual components of communities and determining their connections and relationships with their environment are important for satoyama initiatives to operate synergistically and sustainably. An evidence-based presentation of connections and relationships will allow stakeholders to acquire a broader perspective on the “domino effect” of their actions on the landscape.

With this definition, the Ifugao Rice Terraces is a clear example of a Satoyama landscape with its inherent human-nature interactions and the various social, political, cultural, and economic issues present in the world heritage site.

#Y4IRT Team



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CONSERVING IFUGAO RICE TERRACES AS A SATOYAMA LANDSCAPE



OBJECTIVES

At the end of this book you should be able to:

1. Define the essentials of a satoyama;
2. Describe the dynamics of the natural and social environments in the Ifugao Rice Terraces satoyama landscape;
3. Assess the current issues and concerns of Ifugao Rice Terraces satoyama; and
4. Explain the need for a model for practical and dynamic conservation of Ifugao Rice Terraces satoyama.



CONSERVING IFUGAO RICE TERRACES AS A SATOYAMA LANDSCAPE

CHAPTER 1: IFUGAO RICE TERRACES AS A SATOYAMA LANDSCAPE



OBJECTIVES

At the end of this chapter, you should be able to:

1. Define the essentials of a *satoyama* landscapes;
2. Recognize that the *muyung*, *payoh*, *habal*, *wael* and the *boble* of the Ifugao Rice Terraces are its parts as a *satoyama*;
3. Discuss other Philippine *satoyama* landscapes; and
4. Discuss global recognitions of IRT as a *satoyama* landscape.

Hello. My name is Bugar, and together with Wigan, we welcome you to our book. We will be assisting you in learning the topics at hand, and we hope you enjoy learning the topics included here.

This book will introduce to you the essentials of a *satoyama* landscape, the Ifugao Rice Terraces as a *satoyama* landscape, and the dynamics of the human-nature interaction with the inherent issues and concerns affecting the Ifugao Rice Terraces.

Before all of that, familiarize yourself first with the concept of *satoyama*.

Hi. I'm Wigan. Do you know what *satoyama* is?

Satoyama is a Japanese term comprised of two words: "*Sato*" meaning home or native place, and "*Yama*" meaning mountain or woodland. In simple terms, *satoyama* describes a village and its populace and their relationships with the mountain or woodland.



'sato' + 'yama'

IFUGAO RICE TERRACES AS A SATOYAMA LANDSCAPE

Based on this definition of satoyama, it is clear that the Ifugao Rice Terraces is a satoyama landscape. The Ifugao Rice Terraces (IRT) is a collective of five rice terraces located in four municipalities in Ifugao (Banaue, Hungduan, Kiangan, and Mayoyao). The IRT was inscribed by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 1995 as a World Heritage Site and was pilotly declared as the only Globally Important Agricultural Heritage Systems (GIAHS) site in the Philippines by the Food and Agriculture Organization (FAO) in 2005.

This book focuses on the characteristics of a satoyama landscape, natural and social environments in the IRT satoyama landscape, and needs for a practical and dynamic conservation of the IRT. You will further learn about the global recognitions of IRT, the indigenous social and traditional practices in the IRT, the human-landscape interactions in the IRT, and the environmental problems and social/political/cultural/economic issues of the IRT.

You must know by now what satoyama means and what you will learn in this book. You can proceed to the topic discussion and the activities.

To start, read this transcription of the video interview with women from Batad, Banaue who shared their views on the abandonment of the rice terraces and on the pursuit of children for better opportunities outside of Ifugao. This interview was conducted by the Youth for Ifugao Rice Terraces Project team in 2018.



Pakikipagkwentuhan with the women from Brgy. Batad, Banaue, Ifugao. These women farmers work part time as massage therapists to earn additional income for their families. Photo by the Youth for Ifugao Rice Terraces Project. Used with permission.

Interview Question 1: As parents, would you prefer if your children were to stay here in Ifugao or go outside of Ifugao to study and to work?

"It is important that they have work outside of Ifugao because it is difficult to live here if you do not have a job."

"Other parents give their first and second children inheritance. The following children would not be of help to the family [because they do not have inheritance] so they have to go outside to work to help the family."

"As a mother, I will leave the decision to my children. If they want to stay here in Ifugao or not. Even if I have given them inheritance and they do not want it, I will not force them to stay here in Batad [Ifugao]. What if your mother asked you to stay because she will give you a house and land? Would you stay? Or would you leave? It depends on our children. It's not just because we have an inheritance from our forefathers that we will force our children to stay in Batad. Our children now are intelligent, and they want to explore. So, I think they should not be forced to stay in Batad. Let's say that I have more than two children, there will be someone who will stay here. People do not have the same beliefs and interests. It's either they want to stay in Batad or they want to leave Batad [for better opportunities]."

"If my children want to work outside of Ifugao, then I will let them work outside. It depends on the interests of my children. If they lack education, even basic reading and writing, definitely they will be reluctant to go outside of Ifugao, so they would rather stay here. But for those who are educated, even if they do not have permanent jobs, they would go abroad or to Manila or to Baguio. I will not force my children to stay just to maintain the rice terraces."

"It is important for the children to go outside of Ifugao to work and to help the family. But if the parents are ill, if they need their children to come home, the children will have to come home because no one will take care of their parents but them. What seems to be evident is the third child and beyond are those who leave Ifugao to work because they do not have inheritance."

Interview Question 2: Do the first and second children work in the rice fields?

"No, if they have jobs outside of Ifugao then they attend to that. If, let's say I have an inheritance, but I have a job in Manila or outside of the Philippines, and my parents can still manage our rice paddies, then I will ask my parents to farm. If they cannot tend to the rice fields, I will pass my inheritance to my siblings who don't have one. But it still depends because for some. Some would give it [their inheritance] to their cousins or to someone they want to have the rice field/s. It differs, but as far as I know, people still give their rice fields to people within the family."

Interview Question 3: Are there abandoned rice terraces here?

"Yes. There are. Actually, we had a conversation with the municipal mayor last year that the [Philippine] Department of Agriculture would adopt some rice fields, but until now there are no actions."

Interview Question 4: They were supposed to "adopt" these abandoned rice terraces, but are people allowed to touch these abandoned fields?

"No, they are not allowed."

IFUGAO RICE TERRACES AS A SATOYAMA LANDSCAPE

Following that, read the transcription of this video adopted from ABS-CBN News' (Youtube channel) "Preserving Ifugao Culture."



The majestic Batad Rice Terraces, located in Barangay Batad, Banaue, Ifugao. Batad is dubbed as the best and most well-preserved rice terraces in the region. Photo by the Youth for Ifugao Rice Terraces Project. Used with permission.

The Ifugao Rice Terraces (IRT) is a recognized UNESCO World Heritage Site and is considered a natural treasure. However, it is now at risk due to abandonment by the Ifugaos in search for better opportunities. Instead of the Ifugao youth taking on the task to conserve the rice terraces, they are focusing on looking for jobs elsewhere, even abroad.

The local government, in response to this problem, addressed the issue by teaching traditional terrace preservation practices to elementary students. By which, hopefully, the significance of the IRT to the Ifugao culture will be integrated into the young generation. The students learned the basics of stone riprapping or tupeng, used by the Ifugaos to form the terrace walls and was oriented on Ifugao culture and traditions. Children are taught as well with Ifugao skills such as woodcarving, weaving, stone tiling, and chanting.

Preservation and conservation of Ifugao culture and IRT through transfer of indigenous knowledge and skills of the Ifugaos is the primary mandate of the program. The teachers are called culture bearers, teaching the younger generations with the ways of the older generations of Ifugaos.

Efforts on conserving the IRT and on adopting abandoned rice terraces should be continuously done and supported to ensure the maintenance of the IRT and of the culture that protects it.

After watching these videos or reading the transcriptions, are you now ready to have a closer look at the Ifugao Rice Terraces as a satoyama landscape?

Read the topic below and then you may proceed to the first learning activity.



TOPIC 1


THE SATOYAMA LANDSCAPE

To begin the discussion, you may read the paper entitled "Satoyama landscape in the Philippines" by Buot and Osumi (2004). You can access the paper using this link: <https://bit.ly/32DUmLX>

The paper emphasizes that satoyama is a socio-ecological landscape made of three distinct components: 1) the human-managed forest, 2) the farm, and 3) the village.

These three components exist harmoniously.

Buot and Osumi (2004) identified that satoyama landscapes in the Philippines are of three types, namely: 1) satoyama associated with rice farms; 2) satoyama associated with rice and other crops; and 3) satoyama associated with corn farms. In addition, please refer to Figure 1 below to recognize the other parts of the Ifugao Rice Terraces.



| Kiangnan | Hungduan | Banaue | Mayoyao |
|---|--|---|--|
| Communal Forest | Communal Forest | Inalahan Public Forest | Atha Public Forest |
| "Muyang" Clan Forest | "Muyang-Pinung" privately owned forest | "Banaue" forest adopted by Inahan communities in the same catchment | "Pinudhu" Private forest |
| "Haha" family swidden farms | "Haha/Basa" Family swidden farms | "Uma-Kangin" swidden farms cultivated through a rotation of users | "Uma-Kangin" swidden farms cultivated through user rotation & crop rotation |
| "Bebie" settlement contained by "Agdayan" production area | "Bebie" houses in hamlets "Agdayan" private production area | "Payah" rice terraces (stone-walled) "Nalid" production area | "Payah" rice terraces (stone-walled) |
| "Payah" rice terraces (mostly earth-walled) | "Payah" rice terraces (mostly stone-walled) | "Latajar" Residential area | Houses spread on the terraces defined by "alao" is present |
| "Magalon" grassland | "Magalon" grassland | "Wayagan" grassland | "Magalon" grassland |

Figure 1. Variations of land use and indigenous zoning system in the IRT World Heritage Site. Retrieved from Impact: The Effect of Tourism on Culture and the Environment in Asia and the Pacific: Sustainable Tourism and the Preservation of the World Heritage Site of the Ifugao Rice Terraces of the Philippines (p. 28), by Save the Ifugao Terraces Movement SITMO, 2008, Bangkok, Thailand: UNESCO. Copyright 2008 by UNESCO.



RESOURCES

Try to see for yourself what satoyama really is and what are the different types of satoyama landscapes in the Philippines. You may also view Dr. Buot's presentation slides about satoyama landscapes uploaded at youth4sustainability.com website.

In addition to this, you may also want to learn more about satoyama landscapes from Dr. Buot's presentation "Understanding Satoyama in the 21st century." You can also view this at the University of the Philippines Open University (UPOU) Networks website networks.upou.edu.ph.

Understanding Satoyama in the 21st Century

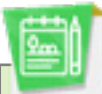


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The activities included in this book may also be answered through enrolling in our free open online course on Conserving Ifugao Rice Terraces as a Satoyama Landscape via model.upou.edu.ph under the Satoyama Online: Living in Harmony with Nature course category.



LEARNING ACTIVITY 1

Now you know what are the satoyama landscapes in the Philippines and the components found in the IRT. Before you proceed further, complete the activity below first. Please accomplish the following:

1. Sketch, take or make a picture/graphics of your own concept of a satoyama landscape. Label as necessary. What do you imagine as you look at the drawing or photo?

2. Do you agree that the IRT is a satoyama landscape as claimed in the paper of Buot and Osumi (2004)? If yes, why do you think so, aside from the simple presence of the three components (forest, village and farm)? What more do you think there is in a satoyama landscape?

Since you now know more about IRT as a satoyama landscape and you were able to synthesize some of your ideas in the previous learning activity, test your knowledge about the new information you just dealt with. You may now proceed to Learning Activity 2.



LEARNING ACTIVITY 2

Do some research and answer the questions below:

1. How do you call or name "satoyama landscape" in your own language? If there is none, what suitable name or words in your own language can you propose (e.g., joining two words together)? Why?

2. List down pairs of crops or any plants you have observed in your surroundings or in your neighboring barangay, municipality, or province having similar characteristics as that of the crops or plants found in IRT.

After having been introduced to the various forms of satoyama in the country, it would be best to also know more about the global recognitions of satoyama landscapes. To know more about this, you may now proceed to the last learning activity for this chapter.



**LEARNING
ACTIVITY 3**

Here are a few more questions to answer:

1. Do you think there is a need for the recognition of important satoyama landscapes such as IRT?

2. Are you aware of recognitions that have been awarded to IRT? Name some.

3. What can you do as a youth or citizen to sustain the recognition of satoyama landscapes? List down 5 initiatives and explain your answer.

CONSERVING IFUGAO RICE TERRACES AS A SATOYAMA LANDSCAPE

CHAPTER 2: THE DYNAMICS OF THE NATURAL AND SOCIAL ENVIRONMENTS IN THE IFUGAO RICE TERRACES SATOYAMA LANDSCAPE



OBJECTIVES

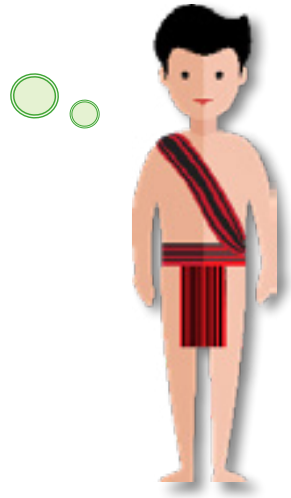
At the end of this chapter, you should be able to:

1. Describe the interactions among the *boble* (community), the *punpayowan* (rice field), the *habal* (swidden farm), and the *inalahan* (forest);
2. Illustrate the indigenous social practices in the IRT:
 - Life cycle
 - Rice production practices
 - Kaingin system
 - Regular cleaning; and,
3. Assess the current directions of the human-nature interaction at the IRT.

We are now in the second chapter!

First, let us review some points discussed in the previous module The Ifugao Rice Terraces (IRT) as a satoyama landscape is composed mainly of its natural and social environments.

What are these natural and social environments? The natural environment includes:



the surrounding forests or "**inalahan**" in local language



A surrounding forest area in Poblacion, Kiangan, Ifugao. Photo by the Youth for Ifugao Rice Terraces Project. Used with permission.

the farmlands;



Rice fields in the Batad Rice Terraces. Photo by the Youth for Ifugao Rice Terraces Project. Used with permission.

and bodies of water like rivers and falls.



Tappiya falls in Barangay Batad, Banaue, Ifugao. Photo by the Youth for Ifugao Rice Terraces Project. Used with permission.

THE DYNAMICS OF THE NATURAL AND SOCIAL ENVIRONMENTS IN THE IFUGAO RICE TERRACES SATOYAMA LANDSCAPE

Together with this natural environment comes various wildlife species and resources that make the IRT a center of biodiversity.

For the social environment, communities around and adjacent to the IRT landscape comprise it.



Ifugao traditional houses in Barangay Batad, Banaue, Ifugao. Photo by the Youth for Ifugao Rice Terraces Project. Used with permission.



Farmers in the Batad Rice Terraces. Photo by the Youth for Ifugao Rice Terraces Project. Used with permission.



These communities benefit from the resources being made available by the natural environment. In return, it is the local people's responsibility to ensure the conservation of IRT and their own culture.

In a satoyama landscape such as the IRT, it is crucial that both the natural and social environments are affecting each other in a positive way. It is also important to look at the current conditions of both and analyze them to come up with conservation strategies.

In this chapter, you will have a deeper understanding of the IRT satoyama's natural and social environments, and on how these two interact with each other to keep life sustainable in the IRT system.





TOPIC 1

THE DYNAMICS OF THE NATURAL ENVIRONMENT OF THE IFUGAO RICE TERRACES

First, review the transcription of the video about the Ifugao traditional rice production, adapted from Nurturing Indigenous Knowledge Experts (NIKE) Ifugao (Youtube channel):



Tinawon rice. Photo by the Youth for Ifugao Rice Terraces Project. Used with permission.

The Ifugao traditional rice production is divided into two phases: field preparation and rice production. It is further subdivided into four seasons in the agricultural calendar: *Kiwang* (off-season), *lawang* (field preparation and planting season), *tiyalgo* (dry season), and *kahitulu/ahi-ani* (harvest season).

Agricultural work within a year was carefully planned by the Ifugao forebearers by considering astrological and seasonal changes that affect crop yield. Since then, this planning enabled farmers to employ organized and efficient tasks in agricultural work.

Among the four seasons of the agricultural calendar of Ifugao, *kiwang/iwang* is the longest and is characterized by rainy and cold days and typhoons. This season spans from late July, or after the last ritual holiday of the previous harvest, until November. Agricultural work in this season focuses on leaving rice fields to fallow to regain fertility, planting woodlets, and harvesting and replanting *swiddens*. Since *kiwang* follows harvest, there is an abundance of food and feasts are usually held during this time.



A farmer making a mound in a rice paddy. Photo by the Youth for Ifugao Rice Terraces Project. Used with permission.

By early August, rice paddies are cleaned of dead and rotting rice plants by small groups of women. These rotten plants are left in the rice fields to decay in the soil and to enhance its fertility. Rotting rice plants and weeds are also used to make mounds, called inado or pingkol, in the center or sides of a rice paddy. Mounds are set up for planting vegetables. Clearing of terrace walls, paddies, dikes and surroundings, and blocking of waterways to elevate water levels in the rice paddies are also done. Fishes and shells can be gathered from the rice ponds. Damages to the rice terraces, especially its walls, from the previous agricultural calendar are repaired by the farmers.

The season following kiwang is the lawang, or field preparation and planting season that spans from late November until March. When the women have cleared the fields from the last season, the men now work in the fields by repairing and reshaping dikes, leveling and draining ponds, preparing seed beds, and removing living organisms that might eat the seeds.



An Ifugao native chicken. Photo by the Youth for Ifugao Rice Terraces Project. Used with permission.

Rituals are first performed before bringing out and sowing the rice grains. One chicken is offered to the deities to gain their favor for the seeds to germinate well and for these to be protected from pests and calamities. For sowing, carefully selected rice grains are brought out to the fields. To prevent fowls from eating the seeds, seeding is only done during the afternoon with the rice panicles laid one by one.

After planting, a ritual rest day called tungo is observed in which no one is allowed to go to the rice fields to prevent provoking the deities that may cause poor seed germination and growth. When seedlings have matured and are ready to be transplanted after a month, transplanting commence which spans from December to March. However, before transplanting could occur, the bolnat ritual is performed for the deities to allow the seedlings to grow well and yield abundantly.

The tulmonak, the village's agricultural leader who owns the biggest rice field, is the first person to do transplanting. They will be followed by other farmers who will transplant seedlings into their respective rice fields. After transplanting, a ritual will be performed to thank the deities for successful transplanting. Every farmer joins this ritual wherein rice wine is prepared. Aside from giving thanks to the deities, they are also asked to protect the crops from pests and calamities.



Rice fields in the Hungduan Rice Terraces. Photo by the Youth for Ifugao Rice Terraces Project. Used with permission.

The third season is tiyalgo or dry season which spans from late March until late June. During this season, farmers devote their time in maintaining their crops. Since it is the dry season, water sources and irrigation channels are regularly monitored to ensure that adequate water supplies reach the rice fields. Irrigation in the rice fields are distributed by bamboo channels. Spillways in the rice fields also maintain water balance. During the rainy season, these are expanded to facilitate the exit of water; while during the dry season, these are closed to keep water.

The hagophop rituals are performed by the farmers to seek permission from the deities before weeding the rice fields to prevent the rice crops from wilting. Chickens are offered to the deities, and certain restrictions are observed. The hulin ritual, which uses wooden implements and bamboo clappers, is performed to drive away rats that threaten the rice fields. When spikelets appear from the crops, farmers would set up scarecrows and strings to ward off birds that would eat the crops.



Women farmers harvesting in the Batad Rice Terraces. Photo by the Youth for Ifugao Rice Terraces Project. Used with permission..

Lastly, the ahi-tulu or harvest season is the shortest season which spans from late June to July and concludes the agricultural year. The hanglag ritual is held to test the rice grains if these are ready for harvest. Crisp rice is made from early bundles of rice grains ripped from the fields. On the day of harvest, the tulmonak is also the first one to yield their rice field/s.

A small group of women, during the early morning before other harvesters arrive, select the best grains for sewing in the next season. While these women harvest grains, they create a cheerful atmosphere to ease their fatigue through chanting. Men transfer the harvest to the village, and rice wines are prepared and served to relieve the thirst of the farmers. For increasing crop yield and protection against thieves and calamities, the deities are sought by the mumbakis. After the day of harvest, the grains are dried under the sun for three days, and then stored in granaries or houses. For continued abundant yield, rice fields and granaries are blessed.

Before taking out the rice grains from the granary, the apuy ritual is held to ask the deities to make the supplies last until the next harvest. Another ritual, the bakle ritual, is held wherein rice cakes are prepared in the granary of the tulmonak and drinking and feasting are done as well. Rice granary gods are brought out so that they can partake in the feast. In the making of the rice cake, glutinous rice is pounded into flour by farmers. Finally, to close the harvest season, the ohap ritual is held wherein all instruments used during the agricultural ritual performances are stored.



LEARNING ACTIVITY 4

Try to draw or take a picture showing the interactions of the *boble* (community), *punpayowan* (rice field), *habal* (swidden farm), and *inalahan* (forest).



RESOURCES

Next, try to search for and read the references linked below on *muyong* or forest management:

- *Muyong forest of Ifugao: Assisted natural regeneration in traditional forest management* (Butic & Ngildo, 2003)

Access it through this link: <http://www.fao.org/docrep/004/ad466e/ad466e06.htm>

- *The Ifugao muyong: Sustaining water, culture, and life* (Serrano & Cadaweng, 2005)

Access it through this link: http://ebooks.lib.ntu.edu.tw/1_file/FAO/177390/ae542e08.pdf

- *The socio-political structure that regulates the Ifugao forest maintenance* (Jang & Salcedo, 2013)

Access it through this link: <http://www.ipcbee.com/vol58/018-ICBEC2013-H3001.pdf>

Key points to remember for the reading references:

- The studies described how the Ifugaos developed a unique way of growing and taking care of forests or muyong.
- There are three types of muyong: 1) planted and passed down to the next generation; 2) recently established on fallow swidden land; and 3) established within the natural forest through long usage claim.
- A muyong serves as a source of fuelwood, wood and water for irrigation of the rice paddies.
- Muyong can be viewed from different perspectives: a forest conservation strategy; a watershed rehabilitation technique; a farming system; or assisted natural regeneration strategy.
- The assisted natural regeneration strategies applied to muyong are: agroforestry and multiple cropping (the Ifugaos plant trees and different crops to ensure crop growth of at least one, and to sustain sources of food and income); enrichment planting with fast growing trees to enhance biodiversity; efficient silvicultural systems (with activities such as thinning, cleaning, pruning, and salvage cutting, which are done to enhance growth and development of natural stands); and whole tree harvesting and good wood utilization practice.
- Woodcarving is a practice deeply related to the muyong since wood used is harvested from the muyong.
- Muyong serves to capture and store rainwater, and release it slowly throughout the year, serving as irrigation for the rice paddies. The excess water flows through the rivers, ending in the Magat reservoir.
- It is prohibited to cut down trees in the muyong without permission, and perpetrators are banished from the community or, in old customary laws, can also be killed as punishment. Local residents, however, may gather dead branches as fuelwood without needing permission from owners.



In addition to this, you can also watch Dr. Nestor Baguininon's webinar on the "The Science Behind the Problem of Earthworms in relation to Rice Terrace Collapse in Ifugao."

This can be viewed at the University of the Philippines Open University (UPOU) Networks website networks.upou.edu.ph.



TOPIC 3

THE CURRENT DIRECTIONS OF THE HUMAN-NATURE INTERACTION IN THE IFUGAO RICE TERRACES

For this topic, accomplish Learning Task 6 where you are tasked to observe and assess the current condition and realities of the human-nature interactions present in your communities.



LEARNING ACTIVITY 6

In this learning activity, you will assess the current realities of the human-nature interactions present in your community. You may do this with your friends, and you may also ask your family members to help you fill out the table below.

Provide at least three current realities and recommendations on how these can be addressed. Use the table below as a format reference.

| Current realities of the human-nature interaction at the IRT | Recommendations to address these realities | Things to be done (Action plan and identified group) to address these recommendations |
|--|--|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

CONSERVING IFUGAO RICE TERRACES AS A SATOYAMA LANDSCAPE

CHAPTER 3: IFUGAO RICE TERRACES CHALLENGES AND CREATIVE SOLUTIONS



OBJECTIVES

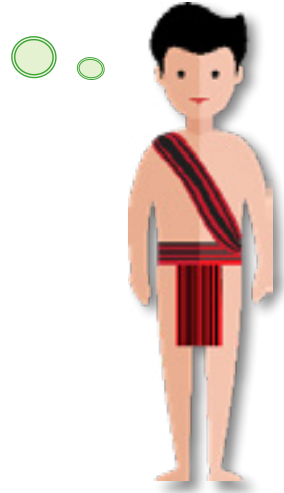
At the end of this chapter, you should be able to:

1. Identify environmental problems related to the culture of rice in the terraces;
2. Explain the social, political, cultural, and economic issues or concerns of the IRT; and,
3. Develop participatory community plans and activities for the IRT.

Welcome to Chapter 3!

We have now learned what *satoyama* landscapes are, what its components are, and why the IRT is considered a *satoyama* landscape.

According to the Save the Ifugao Rice Terraces Movement (2008), the IRT is an “organically-evolved cultural landscape that has been shaped by sacred traditions and the ingenuity of the Ifugao people who have transformed the difficult terrain of the Cordillera Mountains.” Its preservation, however, requires a concerted effort from the community, the local government, the nation, and the world.



There are several identified issues and problems for the conservation of the Ifugao Rice Terraces. In 1994, a six-year master plan was formulated for the preservation of the Ifugao Rice Terraces (OIDCI and PROSI, 1994). In this master plan, several problems were identified and would still hold true today. The identified issues and problems are:



A. Geologic hazards such as faults and earthquakes



Inyo earthquake fault [digital image]. (2016, May 28). Photo retrieved from <https://www.flickr.com/photos/39908901@N06/29582264110>.

B. Decline in forest areas and resources



Deforestation [digital image]. (2016, March 17). Photo retrieved from https://commons.wikimedia.org/wiki/File:Deforestation_2074483b.jpg.

C. Terrace degradation and abandonment, poorly maintained irrigation structures, and high cost of labor



Unregulated rice paddies in the Hungduan Rice Terraces. Photo by the Youth for Ifugao Rice Terraces Project. Used with permission.

D. Conflicts on ancestral domain and national land tenure systems



Task Force Anti-Apeco (Photographer). (n.d.). Agricultural land conflict [digital image]. Photo retrieved from <https://aurorafreeport.wordpress.com/documentation/#jp-carousel-258>.

E. Inadequate plans and lack of proper facilities for tourism; unregulated commercial and residential development



Community and commercial settlements in and around Banaue Rice Terraces. Photo by the Youth for Ifugao Rice Terraces Project. Used with permission.

F. Commercialization of culture



Cienca, S. (Photographer). (2005, June). Mumbaki's ritual [digital image]. Photo retrieved from <https://www.flickr.com/photos/bigberto/924700439>.



In addition to these, the aging population of Ifugao farmers coupled by out-migration of youth has exacerbated these problems since there is no rice terraces without the farmers. The preservation of rice farming and farming traditions is dependent on the youth as they are the next generation of farmers and indigenous culture bearers.

Now, in this chapter, we will focus our attention on the current issues and concerns of the IRT and its environments. We will be viewing and creating multimedia materials to understand the multi-dimensional characteristics of the IRT in view of social, political, cultural, and economic concerns that threaten its existence.





TOPIC 1

IDENTIFYING THE PROBLEMS AND ISSUES IN THE COMMUNITY

First, review this transcription of a video about the factors that threaten the sustenance of the IRT as a natural and cultural heritage. This video was adopted from Butch Nolasco's (Youtube channel) "Vanishing heritage: Saving the Rice Terraces of the Philippine Cordilleras."



A village elder in Batad demonstrating how to grind tinawon. Photo by the Youth for Ifugao Rice Terraces Project. Used with permission.

Ifugao comes from the term ipugu meaning "people of the hill.". According to studies, it was reported that early Ifugao settlers were pushed into the mountains during the Spanish occupation because of population pressures on lowland. The terraces were built for the cultivation of gabi, and rice planting was adapted thereafter.

In 1995, the IRT was included in the United Nations Educational, Scientific and Cultural Organization's (UNESCO) World Heritage List. Only sites or locations of outstanding cultural significance and value to mankind are inscribed on the list. The World Heritage Committee considered the IRT as "an outstanding example of land use resulting from a harmonious interaction between people and their environment which has produced a steep-terraced landscape of great aesthetic beauty."

The IRT was inscribed because of its unique "living" environment. There is an environmental or agricultural system that is completely self-sustaining, alongside an overwhelmingly beautiful landscape. However, among the six

World Heritage Sites in the country, the IRT was included in UNESCO's danger list from 2001 to 2011. Being on the danger list means that the IRT was in an imminent threat of ceasing existence. It was believed that the diminishing lifestyle of maintaining the rice terraces caused this threat.

In the eleven municipalities in Ifugao, five terrace clusters make up the UNESCO-inscribed IRT. However, these terraces are damaged and/or neglected. Two environmental factors are attributed to the deterioration of the IRT: deforestation and presence of giant earthworms.

The forests form a part of the Cordillera watershed, and with the trees being cut down, water is lost. Locally, the forested areas are called muyung or muyong, and these are vital sources of water for the IRT, as well as for the Magat Dam (which is one of the biggest hydro-electric dams in Asia). Losing water contributes to soil erosion and frequent landslides in the rice fields.

Giant earthworms are believed by most farmers as the main contributor to terrace damage since these pests bore through the soil and create burrows or holes. Water seeps in through these burrows, softening the soil and eventually causing the terrace walls to collapse.

Aside from environmental factors, socio-economic and cultural factors are also attributed to the deterioration of the IRT. Ifugao youth who have gotten degrees and became professionals look for jobs elsewhere or outside Ifugao.

Reasons as to why less Ifugao youth engage in the terraces include:

1. maintaining the terraces is laborious;
2. maintaining the terraces is a "losing" situation since maintenance cost per unit area is high, but yield per hectare is low; and
3. it takes time to work on the rice fields.



Harvested tinawon rice. Photo by the Youth for Ifugao Rice Terraces Project. Used with permission

It is a question of whether it is still worthy to maintain and do work on the rice terraces when it is costly; if instead, high-paying jobs can be opted. Consequently, old Ifugao people are then left to work on the rice terraces.

Harvested only once a year, tinawon is Ifugao's traditional rice, and traditional farming methods are employed by the people during planting. Recently, other varieties that yield more than once a year are being used by farmers to increase output and income. Hence, some traditional practices are no longer being followed. Artificial fertilizers (instead of reusing rotting rice plants) and pesticides are being utilized in rice production. This then caused changes in the traditional agricultural cycle. Planting is supposed to be done at the same time during the lawang or planting season, but current practices neglect synchronize planting which is one way of pest management in the rice fields.

The Ifugao culture is adapting to changing times. While the IRT was built in response to Spanish colonization, that is no longer true with increasing globalization and modernization. Attitudes, belief systems, and traditions have changed. The preservation and existence of the IRT is highly dependent on the Ifugao generations still living within the rice terraces landscape. Without the people conserving and preserving the rice terraces, the IRT will cease to exist and to be relevant.

Due to the deterioration of the IRT, continuous efforts have been implemented by both national and international agencies to preserve the once called Eighth Wonder of the World. Plans on preserving indigenous knowledge, systems and traditions were formulated. Programs to bridge the knowledge gap between the old and young generations by transferring terrace maintenance knowledge from the elders were implemented as well.

Schools of Living Traditions were established by the provincial government, the National Commission for Culture and the Arts, the Department of Education, and the Ifugao State College of Agriculture and Forestry to help preserve Ifugao cultural practices. There are several more activities implemented by concerned local and international groups on the conservation of the IRT. As a result of these efforts, the IRT was removed from the list of endangered World Heritage Sites in 2012.

However, getting the IRT off the list does not mean that the national and local governments and concerned international groups should stop supporting and funding efforts on the conservation and preservation of the IRT.

The IRT is a physical evidence of Filipino ingenuity and craftsmanship. In 1996, the American Society of Civil Engineers recognized the IRT as one of the world's best examples of soil and water conservation technology. It is of significant scientific value since early Ifugaos were able to recognize the "power" of water, and they utilized it in managing soil erosions and landslides in the rice terraces.

Through trial and error, the early Ifugaos accumulated a vast amount of indigenous knowledge which they practiced in carving out one of the Philippines' greatest achievements—the IRT. The IRT is a world heritage, and it should be continuously appreciated and recognized.

Its significance to tourism, agriculture, environmental value, economy, cultural value, history, and development of the Ifugao province is unparalleled, and its legacy can only be conveyed to future generations through constant conservation and preservation.



Batad Rice Terraces. Photo by the Youth for Ifugao Rice Terraces Project. Used with permission

Take a look and observe your community or neighborhood. Do you think the problems and issues mentioned in the beginning of this chapter are evident?

Accomplish this next activity about identifying these problems and issues from your perspective.



LEARNING ACTIVITY 7

Draw or illustrate your concept of the IRT and its problems. Indicate its impact on you and your future.

Take a short walk around your neighborhood and take a photo, a series of photos, or a video of an issue or a problem that has been bothering you. Write why this issue is important to you, and either:

- Create a meme using your own picture and writing your own tagline, examples shown below:

A meme is defined by Merriam Webster Dictionary as “an idea, behavior, style, or usage that spreads from person to person within a culture or an amusing or interesting item (such as a captioned picture or video) or genre of items that is spread widely online, especially through social media.”



Is this where I belong? Photo/meme by the Youth for Ifugao Rice Terraces Project. Used with permission.



Don't go breaking my wall. Photo/meme by the Youth for Ifugao Rice Terraces Project. Used with permission.

- Create a short video blog (vlog) identifying a specific problem. Why is this particular problem of importance to you?

A vlog is defined by Merriam Webster Dictionary as “a blog in which the postings are primarily in video form.”

For this activity, you may opt to share your meme or your vlog via social media. Post your work and use the hashtags:

#Y4IRT #TowardsSustainableDevelopment #UPOpenUniversity

Here are a few more questions to answer:

If you were the Barangay Chairperson, how will you present this problem to your community? Or how you will convince your Barangay Council to address the problem?



TOPIC 2

EUREKA MOMENT!

The eureka effect (also known as the aha! moment or eureka moment) is defined as common human experience of suddenly understanding a previously incomprehensible problem or concept (Eureka effect, n.d.).

In the next learning activity, you will have to provide creative solutions to the problems you have identified in Learning Activity 7.



LEARNING ACTIVITY 8

A group of young mountaineers in Tanay, Rizal was able to come up with a solution to their deforestation problem. Read the transcription of the video (adopted from the video in the TAYO Awards Foundation Youtube Channel) about this group's initiative.



TAYO Awards Foundation (2015, December 7). Tanay Mountaineers - TAYO 13 [screen shot]. Retrieved from <https://www.youtube.com/watch?v=xd-dt4uRvXI>.

Our mountains and forests are degrading and based on analysis, charcoal production is the main cause of mountain and forest degradation. Charcoal production was coined as the “silent killer of Philippine forests.”

Hence, a group of individuals, the Tanay Mountaineers Incorporated, devised a new material—the charcoal briquettes. Instead of the conventional method and materials of producing charcoal, charcoal briquettes are bio-charcoals made from industrial wastes such as twigs, small branches and dried leaves.

It is made by producing charcoal (using industrial wastes), shredding it to powder form, mixing, then molding or briquetting, and letting it dry. The group was able to utilize things in our environment which were once deemed useless, and simultaneously, they were cleaning the environment as well. According to the Tanay Mountaineers Inc., 88 trees are saved by producing one ton of these charcoal briquettes.

After watching the video, answer the following questions:

What creative solution/s is/are mentioned?

Do you think the problem mentioned is present in your community?
If yes, what other solutions do you think would be appropriate for
your community.

Lastly, using the Tanay Group of Mountaineers as an inspiration, propose a sustainable and environmentally-friendly solution to address the problem you have chosen in Learning Activity 7. You may either record yourself talking about the problem and your proposed solution or create a simple illustration

CONSERVING IFUGAO RICE TERRACES AS A SATOYAMA LANDSCAPE

CHAPTER 4: PRACTICAL AND DYNAMIC CONSERVATION OF THE IFUGAO RICE TERRACES SATOYAMA



OBJECTIVES

At the end of this chapter, you should be able to:

1. Define what conservation is;
2. Describe the relationship between the IRT issues or concerns and conservation;
3. Identify Ifugao indigenous conservation practices in the muyong, payoh and boble; and,
4. Explain national and global recognition of IRT's state of conservation.

Finally, we are now in the last chapter of this course. I hope you have learned a lot from the previous chapters.

In this chapter, we will be discussing what conservation is, how the Ifugaos conserved the IRT which made it last for centuries, and how they established connections between IRT problems and (lack of) conservation by drawing out the wisdom of indigenous knowledge, systems, and practices.



In case you didn't know, conservation is inherent in the various indigenous practices in the IRT, as you will observe in the woodlot, in the rice terraces, and in the community. It is through the Ifugao practice of conservation that global recognition is bestowed on the IRT. This makes you feel proud of the Ifugao ancestors' ingenuity, doesn't it?





TOPIC 1

WHAT IS CONSERVATION?

Conservation is defined as “a careful preservation and protection of something.” This will lead you through how conservation can be observed in the home and in the landscape. Take note of this definition as you will eventually have to come up with your own definition of conservation.



LEARNING ACTIVITY 9

Before we proceed, look for one object in your house that has been inherited from your grandparents or ancestors. It could be kitchenware, tools, fabric, accessories, or any other object. Write the name of the object in the box.

After identifying one object, answer the following questions and then relate it to how the Ifugaos are protecting the Ifugao Rice Terraces as an inheritance.

- What is the object?
- Who previously owned it?
- Where is it stored?
- Is it being used?
- What is its value (monetary, utility, etc.)?
- If in good condition, how was it taken care of?
- Does it have any damage?
- If so, how was it damaged?
- When was it damaged?
- Can it still be repaired?

The object you identified in this learning activity is part of your heritage. It is something from the past that has value that you will pass down to your future children or grandchildren. The manner by which it was treated is how conservation was done or was not done.



TOPIC 2

IFUGAO RICE TERRACES ISSUES & CONCERNS VIS-A-VIS CONSERVATION

The following activities will help you gain more understanding about the second topic. The relationship between the IRT issues, concerns, and conservation will be discussed.

The issues and concerns in the rice terraces can be traced to how it started and how it reached the point that it became a problem. It might be traced to the time that an indigenous knowledge, system, or practice was not used anymore.



LEARNING ACTIVITY 11

Situational Analysis: Outmigration

Before we proceed with the activity, read the following story:

Melody Tayaban passed the Board Exam, and the family is overjoyed! Another engineer in the house! Another professional to join her siblings in Houston.

However, the family was surprised. Engr. Melody decided to join a non-government organization (NGO) and decided to work in Banaue, Ifugao.

"Sayang ang dollars. Sayang ang talent niya as an engineer, it will not be used," said her Aunt.

Engr. Melody explained that the eroding stonewalls in the rice terraces need to be studied and restored. Her engineering skills are needed, and the NGO will provide meals and lodging.

Answer the following questions. You may also discuss your answers with someone from your circle and solicit their opinion about this topic.

Who do you agree with, the Aunt or Melody? Why?

If you agree with the Aunt, describe all the benefits that you think overseas employment will give:

Who do you think will benefit from Melody's overseas employment?

If you agree with Melody, describe all the benefits that you think staying in Ifugao will give:

Who do you think will benefit from Melody's stay in Ifugao?

If you were Melody, what would you do as a newly licensed engineer?



TOPIC 3

INDIGENOUS PRACTICES IN THE IFUGAO RICE TERRACES

Just like the previous topic discussions, you will be given activities in the following pages to gain more understanding about some of the Ifugao indigenous conservation practices in the *muyong*, *payoh* and *boble*.



LEARNING ACTIVITY 12

Do your research regarding *muyong* and conservation practices associated with it, you may look at images available on the web, look for readings on the *muyong* and conservation practices, or you can watch videos to have an idea regarding the topic given.

Visualize the *muyong* as described in the research you have gathered then draw or illustrate a poster of the *muyong* showing the conservation practice. Properly label your drawing or illustration.

A large, empty rectangular box with a thin black border, intended for the student to draw or illustrate a poster of the *muyong* showing conservation practices.



TOPIC 4

RECOGNITIONS OF THE IFUGAO RICE TERRACES

The conservation practices of the IRT have maintained a landscape that endured centuries and spanned many generations. National and global recognitions from the government and international organizations have been bestowed on the Ifugaos for producing a living cultural landscape with outstanding universal value.

WHAT THEY SAY

Presidential Decree No. 260

Declaring the ...Ifugao Rice Terraces of Banaue as national cultural treasures...

Source: http://www.linghi.net/History/Presidential%20Decree%20260_2073.html

American Society of Civil Engineers

A Historic Engineering Landmark for water supply and control

Source: <http://www.asce.org/press-releases/2012/06/20/american-society-of-civil-engineers-declares-the-ifugao-rice-terraces-of-banaue-a-historic-engineering-landmark>

Globally Important Agricultural Heritage Systems (GIAHS)

The local management and governance of the rice terraces have been influenced by culture embodied in customary laws based on social taboos and customs handed down from one generation to the other.

Source: <http://www.fao.org/gis/ia/iaaroundtheworld/designated-areas/asia-and-the-pacific/11900-rice-terraces/detailed-information/en/>

UNESCO

The Rice Terraces of the Philippine Cordilleras is an outstanding example of an evolved, living cultural landscape that can be traced as far back as two millennia ago in the pre-colonial Philippines.

Source: <http://whc.unesco.org/en/list/722>



LEARNING ACTIVITY 13

Review the transcription of the video about the IRT as a World Heritage Site. This video was adopted from Butch Nolasco's (Youtube channel) "Legacy: Philippine World Heritage Sites."

Answer the question that follows after this transcription.



Top view of the Mayoyao Rice Terraces. Photo by the Youth for Ifugao Rice Terraces Project. Used with permission.

Covering an area of 20,000 sq.km, the IRT was inscribed by UNESCO on its World Heritage List in 1995. The IRT, one of mankind's outstanding achievements, was created by the fiercely proud and independent people of Ifugao.

Being one of the most extensive rice terraces systems in the world, aerial photographs of the site reveal a vast magnitude of rice terraces. It celebrates the genius, craftsmanship, and soul of the people who built it and who continuously maintain it. There is also a sense of national pride in knowing that such a landscape of cultural and environmental significance rests in the country.

An entire system of agricultural, cultural, engineering, and environmental practices was developed by the Ifugao forefathers through hard physical labor. The IRT boasts of ingenuity since it is not easy carving and constructing terraces into steep mountainsides using only basic tools.

It would not be possible for the IRT to be recognized as one of the world's best soil and water conservation systems if not for the engineering principles applied to the rice terraces. Building and maintaining rice terraces involve water. A dam is built on an upper elevation to hold water, which will eventually flow down to the rice fields below. This flowing water through irrigation systems such as bamboo channels and spillways also carry soil and gravel which are essential for the rice fields.

Water that supplies the rice terraces come from forests atop each cluster of terraces called muyong. The cycle begins from trees gathering moisture, then its roots feed the streams that eventually divert water to the irrigation channels.

Seasons in the agricultural cycle are characterized by various rituals specific to an occasion in a season. Specifically, a ritual performed during harvesting is by chanting hudhud, honored by UNESCO as one of the world's masterpieces of oral and intangible heritage of humanity.

These traditional practices are still adapted by the Ifugaos up to this day to maintain the terraces and make the IRT a self-sustaining cultural landscape that is cited by UNESCO.

For you, what recognition or award would you bestow on the IRT? Consider its importance to you, your family, your community, the country, and the world.

CALL FOR ACTION

**PD NO.
260**

“

There is a necessity of preserving and utilizing the cultural properties of the nation for the furtherance of the people's culture

”

FAO

“

However, the rice terraces are now in a very critical stage of deterioration and do not allow the local communities to overcome the poverty line. The continued survival of the terraces is threatened by various factors such as environmental degradation, unregulated development and neglect brought about by urbanization and changing values

”



LEARNING ACTIVITY 13

For the last learning activity in this book, you should be able to synthesize all the activities you have done so far, and then create a write up and post it as a vlog or you can make video that will feature your friends or family and their reactions to IRT conservation.

If you chose to do a video, you may follow the steps below to complete your output:

1. Approach three of your friends or family members and ask if you could interview them using video recording.
2. Using the video feature of your mobile device or any gadget, record their answers to the following questions:
 - What is your definition of conservation?
 - Do you think the conservation of IRT is important? Why or why not?
 - What are the conservation strategies for the IRT that can you think of?
3. Let them read about your write up on Learning Activity 10 about "My Definition of Conservation."
4. Ask if they are aware of conservation practices done in the *payoh* and in the *boble* of the IRT.
5. Get a consensus if there is a need to know more about IRT conservation.
6. Make a short (3 minutes) video story of you and your friends' or family's take on IRT conservation.

For those who will choose a write up or blog, you may use the questions above as interview questions to gain more insight.

For this activity, you may opt to share your write or your video via social media. Post your work and use the hashtags:

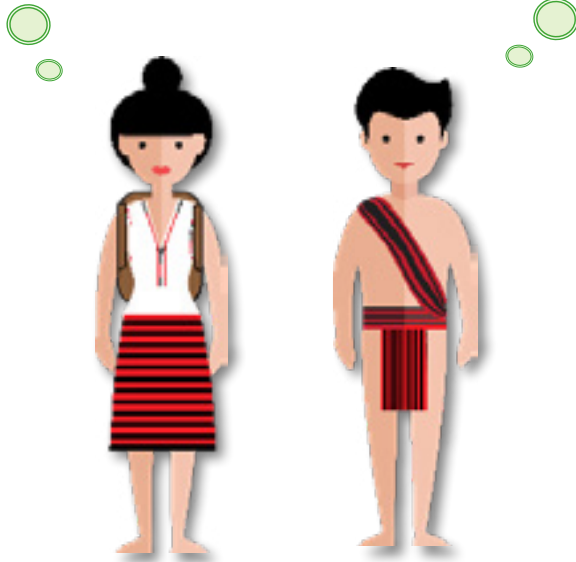
#Y4IRT

#TowardsSustainableDevelopment

#UPOpenUniversity

That's it for the book! See
you on the next one!

Congratulations on
completing the activities!



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