

THE IVATAN CULTURAL ADAPTATION TO TYPHOONS: A PORTRAIT OF A SELF-RELIANT COMMUNITY FROM THE INDIGENOUS DEVELOPMENT PERSPECTIVE

Fr. Raymundus Rede Blolong, SVD

The Ivatan of San Joaquin Valugan, Basco Municipality, possess an indigenous self-reliant long-term cultural adaptation to the natural hazard of continuous typhoons. Their knowledge of various typhoon categories and storm warning signs; land-use and management; practices related to agriculture, livestock, agroforestry and fishery; and their strict adherence to the *pilatun* (time guide) all contribute to their survival despite the isolation from the rest of the country. Their adaptation is built on the special way they think about and treat *uvi*, other root crops, dorado/*arayu*, and the sea god, *mayu*.

Introduction

The Philippines is one of the Southeast Asian countries often hit by natural disasters. Among these natural calamities are typhoons that strike some regions, provinces, and islands of the country, causing death, and destroying many natural resources.

Batanes is an interesting province because of its location in a catastrophe zone or typhoon belt. Aside from being a province isolated from other parts of the Philippines (communication and access to the province are problems), Batanes Province is hit by strong typhoon winds almost the whole year round (for nine months of the year). Lorente (1983) says that Batanes is one of the most storm-battered places in the world. Typhoons have become part and parcel of the life of its inhabitants. There is an endless struggle for survival against nature. Therefore, it can be concluded that geographically, Batanes is a difficult province for human

habitation. The life of the Ivatan is risky and threatened with danger. How they overcome it must be instructive.

Anthropological studies on hazardous environments done in other parts of the world show that to survive in hazardous zones, human beings, through their culture, must make proper adaptive responses to such natural hazards. R. H. Simpson once said (in the "Conference on the Survival of Humankind: The Philippine Experiment" held in the Philippines from 6-10 September, 1976), that the Philippines suffers from more tropical cyclones or typhoons than any other country in the world. The problem of the typhoon, however, according to him, is to live or to die with it, if there are no proper coping strategies practiced by the local people.

However, in Batanes, the Ivatan are still alive. They survive from one typhoon to another. Thus, questions have been raised regarding their coping strategies in dealing with the typhoons. How do they adapt themselves to near continuous typhoon weather in order to survive, considering the fact that the province is so isolated from the rest of the Philippines? What indigenous coping strategies to typhoons do the Ivatan of the Batanes have?

Theoretical Background

There are hundreds, even thousands, of natural disasters every year that strike the whole world or parts of it. Approximately 90 percent of the world's natural disasters originate in four hazard types: floods, tropical cyclones, earthquakes, and drought. Studies and scientific researches regarding calamities and responses to natural hazards have been made by scientists from different disciplines including anthropologists: William I. Torry, Anthony Oliver-Smith, Ian Burton, R. W. Kates and Gilbert F. White, Thomas D. Hankins, Leslie E. Sponsel, and Susan H. Lees, among others.

Regarding responses or approaches to natural hazards, they have concluded that there are two broad types that are different in nature and contrary to each other. They are cultural adaptation and adjustment.

Cultural adaptation refers to indigenous coping strategies or responses to natural disasters or extreme events practiced by a society or a local people using their own capabilities, skills, talents, abilities, knowledge, and technologies. Learned from their ancestors and their own experiences,

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these are made part of their traditions. Cultural adaptation is long-term and life-long in nature. Cultural adaptation does not rely much upon support and assistance from outsiders including government. It is low in capital requirements. It is characterized by the readiness of local people to cope with natural disaster whenever it occurs without going into shock, for they have been able to bring about a more stable interaction between themselves and their environment, involving ingenious and beneficial use of available resources. These consist of local knowledge, cultural aspects and values, indigenous institutions, traditional care-taking operations, role of local leaders, and local decision-making process.

Cultural adaptation is also called "folk or pre-industrial response" (White, 1974) and the "homeostatic approach" (Torry, 1979) to natural hazards.

Adjustment, on the other hand, includes all human responses to natural disaster, the intent of which is to reduce the negative impacts of the extreme event. Adjustments are incidental, immediate, temporary, and short-term responses. They rely on outside support and aid, and are high in capital requirements. Programs are made by outsiders, including the government. The culture of the local people is not taken into consideration. Adjustment activities occur only during or in direct response to a specific calamity. Adjustment, being usually in the form of relief from outside, may prevent a local culture from evolving its own behavior to deal with hazards such that when these occur, the people may suffer shock.

Other terms for adjustment found in the literature are disaster relief programs (Brown, 1979) and development approach (Torry, 1979).

It is on the first type of response, cultural adaptation to typhoon as practiced by the Ivatan of Batanes Province, that this study concentrates.

Research Design

The research was conducted among the Ivatan of Batanes Province in a barangay called San Joaquin Valugan that belongs to Basco municipality. The people of San Joaquin Valugan are all farmers and fishermen.

The methods used in gathering data were participant observation, key informant interviewing, inventory taking, tape recording and photography during the months of June to October, 1992 and April to May, 1993. During both periods, the same English-speaking family served

as host. Strong winds and heavy rains were experienced almost every week in the first visit, while the second visit took place during the annual lull in typhoons.

Typhoon Classification and Storm Warning Signs

The Ivatan term for natural disaster is *makamumu a mapaparin*. One kind of *makamumu a mapaparin* is typhoon, *anin* in the language. The word *anin* refers to an extraordinary wind or a super typhoon that is very strong and causes destruction in all sectors of life, and even death. A real *anin* is violent and rages without mercy. Storms are classified as follows: *anin nu vanyeveh*, coconut typhoon, strong enough to destroy coconut palms; *adipogpog*, tornado without rain; *salao-sao*, bad weather or windy day with rain; *dipanchi*, a sudden heavy rain and strong wind which suddenly stops and changes to a sunny day marked with heat and often back again to rain, leading to illness; *nisu*, a windy day without rain; and a depression marked by big waves (which has no term in Ivatan).

In terms of tokens of the coming of typhoons, the Ivatan have the following signs: *du-taw*, the sea sign; *du araw*, the sun sign; plant and tree signs; signs in the sky and the clouds; and animal signs. The sea sign, usually noticed by the Ivatan who resides along the shore, includes very fast running waves moving in straight lines. For the sun sign, the color of the sun's disc is noticed, when its color becomes yellowish, then brownish, then still darker and suddenly disappears. The clouds become very thick, covering Mt. Iraya (in Basco municipality) almost entirely, and move very fast. Ants with white mouths come out from their nests, carrying their belongings and move to another place. The cocks crow at 10:00 p.m. and call to one another. Young rolled banana leaves shoot up from the stalks, getting longer and longer, but curling, and do not spread or open during the typhoon. Knowing all these natural signs and anticipating that a typhoon of any kind might arrive, the Ivatan get ready with the things that should be done before the coming of a typhoon in the house, in the field, and at the fishing port.

The Ivatan culture has a system of classifying storm types and storm warning signs that enable the people to recognize the onset of typhoons and prepare themselves for the event.

Land Fragmentation and Land Tenure

Land fragmentation is characteristic of Ivatan agriculture in Barangay San Joaquin Valugan. It is brought about by partible inheritance and buy and sell of land. The fragmentation may be important for survival. They know that if they plant in widely scattered parcels, even if some crops are damaged by storms in some areas, in others they may be spared. These scattered parcels serve as a safety device. Those who do not have enough land to plant their most important crops may borrow from other farmers with available hectarage, in exchange for a share of the harvest.

Sexual division of labor has the household head working on more distant parcels with a work animal, while the women concentrate on areas nearer home. Because of land fragmentation, locally hand-made tools and animal and man power are the most appropriate for the Ivatan.

Land tenancy does not exist in San Joaquin Valugan. Ivatan are proud of the fact that they are farmers and that each household has its own land, and that they have no problem with landlords. This freedom must be functional in enabling them to meet storm hazards with confidence.

Everything is Planted

The first thing to be mentioned regarding agricultural crops is that, annually, each Ivatan family plants and cultivates all species of crops. Planting everything relates to the adaptive strategy to typhoons and other disasters such as drought, for it is known that if certain species are destroyed because of typhoons, others may survive to guarantee food sufficiency. As they said: "If you plant only one kind and if it died out, what will you eat?"

Identifying themselves strongly as farmers, they say they have to cultivate and plant all kinds that can sooner or later produce and give them food and money no matter how few the crops are in number, given their small farms. "For that's what farmers are for," they said, "cultivating and having all that gives us life, ... keeping all kinds of crops and animals available forever and so preserving these species from extinction," they added. By cultivating and having them all, they are secure as farmers and therefore, alive. Feeling secure in having all kinds of crops means the continuity of their life. Though they may not consume certain foods daily (rice for example), they must plant it every year.

Root Crops

An emphasis on root crops (*umai a mohamoha*) in Ivatan agriculture is another adaptation to typhoon climate because these can be stored in the ground out of reach of the typhoons. These are ranked by the Ivatan as their more favorite food, thus, these are planted from year to year. Yams (two species: *uvi* and *dukay*), sweetpotato (*wakay*), taro (*sudi*), garlic (*akus*), ginger (*naha*), and onions (*bulyas*) are raised at the end of the rainy season. Pigs are also fed taro leaves, sweet potato leaves and tubers, and the small yam tubers.

The favorite and, culturally, the most important food is the greater yam (Iv. *uvi*, *Dioscorea alata*) of which there are more than seven varieties. It is planted and harvested once a year in the most fertile parcels of land. Trees along parcel borders are pruned to minimize shade. The preparation of *uvi* cuttings and their outplanting according to a family's schedule is a social occasion in which friends and relatives are invited to help and partake of food and drink. *Uvi* is usually interplanted with taro (Iv. *sudi*, *Colocasia esculenta*), Goa yam (Iv. *dukay*, Tag. *tugi*, *Dioscorea esculenta*), or corn, so that the *uvi* will be protected by their shade during summer.

Maniva, first harvest of *uvi* and/or first eating of *uvi* is a joyful and social event starting with a thanksgiving prayer. It is timed for social occasions such as birthdays, arrival of visitors, weddings, wedding anniversaries, construction of buildings, and baptisms.

Uvi possesses historical significance since it is the earliest most important crop that the Ivatan realized enabled their ancestors to survive in Batanes. For this reason, it has a quasi-religious significance. Its first cooking must be with dried salted dorado not as a sidedish, but to enhance the taste of the food. Both *uvi* and dorado symbolize the survival of the Ivatan from the distant past and their continuity through time.

Hence the celebratory nature of *uvi* harvest and first eating. There is a feeling of incompleteness if *uvi* is not served in a party for it is symbolic of fertility, long life, and success. It is a status symbol as well. Moreover, it is conceived metaphorically as a person as seen in planting, weeding, and digging.

In planting, its growth point or "head" must be on top if planted on a slope or toward Mt. Iraya if planted on a flat parcel, just as a person can not sleep upside down for his blood will go to his head. In weeding, the sprouts, *tuvu*, or longer stems, *tatayu*, must not be stepped upon, as these are the "body" while the cutting from which they grow is seen as

the "soul" or "breath." In digging, the new *uvi* must not be struck with the hand bar but if this happens accidentally, the Ivatan utter *jablo* or *sus mo Apo*, as if to say "excuse me," "sorry," so that the whole crop will not become angry and refuse to prosper the next season. Thus, a family that is invited by another to help dig *uvi* will always send its most skillful *uvi* harvester.

Because of its historical significance as an adaptation for survival, even a small number of *uvi* is planted by each family as a commemoration. A gift of *uvi* to a relative or friend living elsewhere in the Philippines is appreciated by the receiver as a gift of life. As a gesture of respect, and as a symbol of its old importance in survival, *uvi* is never sold.

Rice

The Ivatan have several varieties of rice, with each household cultivating only two to three. Rice is probably a later crop historically. How can it be made to survive in a typhoon-battered location? Since it is a risky crop, no more than one small parcel, about 400 square meters, is planted yearly. It must be near the house and in a depression, not on a slope, to be shielded from the wind. This parcel is also protected on all four sides by the *vutalaw* tree (*Calophyllum inophyllum* Linn., or *palo maria* in Tagalog), growing six to eight meters in height.

One rice variety, the *malankit* (sticky) is the favorite and used for special occasions. It has no economic significance, for as the Ivatan say, "It is a matter of pride to have native rice of our own." This makes them feel secure and safe. Like *uvi*, it may be sent to loved ones who are living in Luzon, as a gift of love and life from Batanes.

Livestock

The Ivatan raise cattle and carabao that, like their masters, have become used to the weather conditions of Batanes. In case of an approaching storm, livestock in a far field will be tethered on level land in a valley or a depression, or in some places, taken into a cave. They may be tied to a protecting *vutalaw* tree that is not easily damaged by strong winds. Livestock in near fields are brought and tied near the house. On all occasions, the direction of the wind is considered when selecting a side for tethering an animal.

Schedule of Activities

The Ivatan have a horoscope that they call *pilatun* and use as a time guide for undertaking all important activities. About 85 percent of the households in San Joaquin Valugan have their own personal *pilatun* which they religiously follow. Undertakings scheduled by it include buying and selling, taking medicine, breeding animals, starting and stopping work, keeping secrets, sailing and traveling, giving education to the children, getting married, cutting trees, building a house, boat making, and others, but especially all agricultural and fishing tasks. It is based on "good" and "bad" days/dates of the month and of the week, the phases of the moon, and the directions of the wind.

Superficially, it would seem that the *pilatun* is only superstition and might then be dysfunctional in causing families to become over-rigid in their planning of activities. How can the *pilatun* be considered adaptive to the Ivatan geographical situation?

First of all, it organizes the schedules of farmers' activities. They adhere to it strictly and forget nothing important. It enables them to remember many detailed things in various departments of life that cannot be forgotten if they are to survive.

Secondly, the days not governed by the *pilatun* are significant. They are governed by other peoples' *pilatun*. That is to say, that a family on a non-*pilatun* day is free to be invited to help in the agricultural activities of a neighbor or relative, usually a social event often involving cooperation and sharing. In the same way, on a *pilatun* day, a family can invite other farmers who are free to help. And so the *pilatun* is also a schedule of reciprocal labor exchanges.

Thirdly, the *pilatun*, with its social implications, psychologically must aid almost every family in providing confidence that, if it is followed, the family will survive. For as it was said, "if we do not follow our *pilatun*, we will fail."

Agroforestry

The *vutalaw* tree, previously mentioned, is used by the Ivatan in an indigenous agroforestry system in a number of ways to help them adapt to natural hazard, the typhoon. It serves as a windbreak for rice and other crops in the field.

It belongs to the hazel nut family, growing eight to twelve meters, and is characteristically found on the shoreline in the Philippines. It is abundantly found in the interior of Batanes, especially in San Joaquin Valugan, not only on the shore.

In the past, the *vutalaw* branches were burned for use in lime-making, which is now a waning practice. It is planted to mark the field border and to protect all crops from the wind. Its branches are pruned and made into fences when a particular lot is cultivated for they are more durable compared to the branches of other trees. After crop harvest, they are gathered and brought home and used as firewood. *Vutalaw* is a favorite firewood for it quickly dries after collection, even during the rainy season and after a typhoon. Leaves of the cut branches serve as fertilizer when they are scattered. The taut, fresh, and clean leaves can be used as spoons for meals in the field or during a picnic.

Vutalaw is planted not only in the field but also around the house where abundant branches give excellent deep shade for an after-meal rest. Instead of lying down inside the house, which as a protection from the wind has a low ceiling and so is usually warm in all seasons, the residents go out under the trees. Their shade serves also as a temporary kitchen and dining room during summer, or at times of fiesta or a big party. If located near the house, the shade provides a good place for work and for children's play.

The matured *vutalaw* fruit can be eaten by pigs as additional food. The seeds were used in the past for lighting, but now the practice has waned.

On Mt. Iraya, *vutalaw* trees, together with other trees, are purposely conserved for the area is the site of an excellent source of spring water for Basco and Mahatao.

Fishing

Fishing is restricted to typhoon-free months, from an opening ceremony *mayvanuvanua* on March 15 to the start of June. The most important type of fishing during these months is *mataw*. It refers specifically to the catching of dorado/*arayu*, the yellow leather jacket, and its live bait, the *diban* or flying fish.

The *mayvanuvanua* ceremony includes all of the fishermen of Basco, the capital town. Almost all males go fishing in these months and so are

included, and must attend the ceremony. It takes place at Champan Port in San Joaquin Valugan, eastern Basco. In 1993, a fisherman from San Joaquin Valugan was elected to the position of *mandenau* for the year. The *mandenau* is the first one to go fishing. No one can go before him. His initial outing is primarily ceremonial and perhaps functions to give others the confidence to proceed. For he will be the one to see if the dorado/*arayu* and the *diban* are going to be caught. He must make offerings to the sea god (*mayu* or *anitu dut aw*). The offerings include pork, blood, and *palek* or sugarcane wine, and a necklace of light blue beads and old coins worn around the neck or placed in the *tataya*, "fishing boat," and taken to sea but not thrown in the water like the first-named items. The coins are thought of as payment to the sea god for the use of Champan Port and to eliminate all other debts owed to the spirit.

Pilatun in terms of the location of the moon and stars, the direction of the winds, tide, current, and waves, is taken into consideration too. In order to catch dorado, the *diban* must be first caught using *yuyus*, a locally-made fish hook made out of sharp pieces of bamboo and small pieces of wire. *Diban* is caught with *yuyus* which allows the flying fish to be captured alive. Moreover, this live bait is more attractive to the *arayu*. This means that *diban* caught with *dekey-sayren*, "imported fish hooks," and *sakahub*, "scoop net," are not used as bait but taken for home consumption.

The dorado and *diban* caught after the ceremony by fishing crews composed of closely related males are treated, like *uvi*, as a symbol of the life and continuity of the Ivatan people and so are never sold. They are preserved as food for typhoon months by salting, drying in the sun, and then hanging in the kitchen to be smoked for longer preservation.

Conclusion

The Ivatan have an indigenous, self-reliant, long-term cultural adaptation or homeostatic approach to the natural hazard of continuous typhoons. They use their indigenous technical and ecological knowledge and belief systems to give them confidence. Adaptation is built into their culture and outside interference in the name of development would most likely threaten the current sustainability of their own development that has reached an equilibrium.

Adaptation as they see it is necessary not only in the present but must also be possible in the future, and has taken place from ancient times. The long term action of their adaptation is recognized by them and commemorated in the special ways they think about and treat *uvi*, other root crops, dorado/*arayu*, and the sea god (*mayu*).

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