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# Lessons from a Hurricane

Mario Contreras Rosa

Mitch 1998

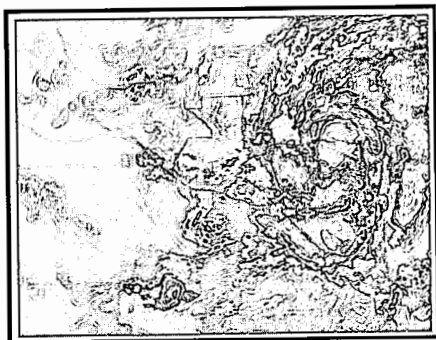


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# Lessons from a Hurricane

Mario Contreras Rosa  
Executive Director  
Zamorano (Escuela Agrícola Panamericana)

Mitch 1998



*With admiration and  
appreciation to the zamorano  
students of all times.*

*Mario Contreras R*



Escuela Agrícola Panamericana  
P. O. Box 93  
Tegucigalpa, Honduras, C. A.  
1998

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Copies of this book can be obtained from the Zamorano Bookstore, P. O. Box 93, Tegucigalpa, Honduras, C. A. E-mail: [libreria@zamorano.edu.hn](mailto:libreria@zamorano.edu.hn). Any income from its sale will be used to provide financial assistance to deserving youths from countries that were affected by Hurricane Mitch.

## Forward

This booklet reflects the ideals and practices of a singular institution and of an exceptional man. I have had the honor to know both Zamorano and Mario Contreras since 1980. I never cease to be surprised by the degree to which the beliefs and the behaviors of the institution and of its graduates are directly in accordance with the needs of the developing countries of Latin America.

Zamorano is an institution that exists to serve Latin American society, and Zamorano makes an effort to maintain close ties with the societies that it serves. However, as the reflections presented here show, Zamorano is also an institution that is distinct from the surrounding society. In many ways, Zamorano provides a powerful, efficacious and relevant alternative and example for society to emulate.

Zamorano is efficacious because its founders, leaders, and teachers have always thought that results count. They have believed that we do not have to do things the same way that other educational institutions do them. Moreover, the institution stands for the formation of the whole individual, and believes in the transforming and empowering value of work. At the same time, we have always had a strong ethic of self-criticism and a desire to constantly renew. Students, faculty, graduates, parents, donors and friends of Zamorano can use this booklet to consider what the institution stands for, has always been, and can become.

1998 may very well be seen as a transitional year in Zamorano's existence. Extensive strategic planning, reengineering and then Hurricane Mitch have allowed us, even compelled us, to reflect on and question what we stand for, and to think about how we can do things better.

One of the key actions taken in the initial steps of reengineering of this institution in June of 1998 was the naming of Mario Contreras as Executive Director. The behavior that he exhibited during the days immediately following the destruction caused by Mitch and his capability to derive lessons from this experience demonstrate that our reengineering got off on the right foot. A second decision we have made as part of our strategic planning exercise is that students should be given the opportunity to be active learners, both in the classroom and in the field; the experiences with Mitch, described herein, confirm that this decision is consistent with our students' capacities and potential.

I am certain that many other people will reflect on what Mitch has meant for Central America. I suspect that this booklet, published in Spanish less than two weeks after the storm hit, will be among the most profound thought pieces on this tragedy. In a broader sense, it is also an important reflection on the strengths of people and on the positive changes that can occur as a result of disasters in human life.

*Keith L. Andrews, Director General  
November 10, 1998*

## *Prologue*

Honduras and neighboring countries recently suffered the devastating effects of Hurricane Mitch. This natural phenomenon unloaded torrential rains on the Yeguaré Region from Friday October 30 to Sunday November 1, 1998.

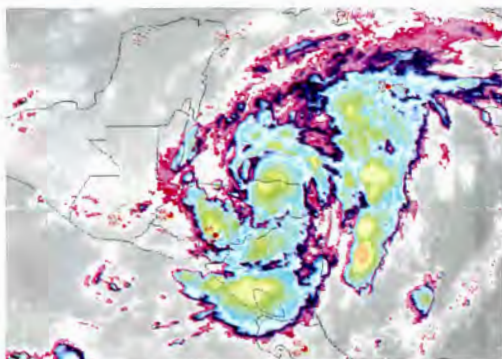
The Yeguaré Region, located in the eastern portion of central Honduras, is comprised of rugged terrain cut by numerous ravines that mark the aged mountains like wrinkles. Because of its mountainous topography, the region is largely devoted to forestry-related activities. Unfortunately, the area has suffered considerable deforestation that has exposed soils to erosion and sudden flooding from the numerous tributaries of the Yeguaré River.

October 1998 was the rainiest month in the 57 years data has been collected. Prior to Mitch, soils were already saturated. The storm lasted for 48 hours, with a total precipitation of 212 mm. measured on Zamorano's campus, which suggests up to three to four time greater precipitation in the mountains. This quantity of rainfall resulted in heavy damage throughout the region.

Zamorano is located in the Yeguaré Region, 35 km. southeast of Tegucigalpa. Its 15,000-acre campus extends west from the center of the valley to the summit of the Uyuca Biological Reserve, a beautiful cloud forest that reaches an altitude of 2,000 m. above sea level. To the east, the campus covers a flat area of the valley where students and faculty conduct many of the academic production activities that have earned Zamorano international recognition and respect.

The waters that flow from Mount Uyuca are used by the college community and neighboring villages, and eventually feed into the Yeguaré River in the lower valley. Unlike most academic institutions, Zamorano has a complete system of agriculture-related production and water utilization that emulates on a small scale what occurs in larger hydrological systems throughout our countries.





Hurricane Mitch becomes a tropical storm.

On Saturday October 31, the Zamorano community awoke without electricity, water or telephone communication. The road to Tegucigalpa was blocked by mudslides in several places, and because it was the weekend, the majority of the college support staff was not on campus. The infrastructure and economic activity of the country was already paralyzed by the collapse of dozens of bridges along the most important land routes that cross the country. The normal supply routes to and from the capital and the north coast were blocked by mudslides, and it was unclear when they would be cleared. Buildings on campus were not damaged, but Zamorano's production capacity was paralyzed. The college's 1,000 residents, including 800 students from 20 countries, faced an unnerving and potentially critical situation.

This booklet contains a brief chronicle of the reaction of the Zamorano community to the damage caused by a major natural disaster. It does not attempt to describe the details of the outstanding performance of the many individuals, particularly students, who in the days following the hurricane transformed this threat into a memorable institutional experience that deserves to be documented. Rather, its purpose is to inspire future generations of Zamoranos, and to provide a glimmer of hope to the people and communities affected by the storm.

## **A special hurricane**

There are no meteorological models or specialized weather centers that could have predicted with certainty the route and final behavior of Hurricane Mitch. Hovering for an entire week over the islands off the northeast coast of Honduras, the hurricane announced its presence to Zamorano with thick cloud cover that blanketed the interior of the country. Its sustained winds were measured at 280 km. per hour with gusts in excess of 300 km, classifying the hurricane as a Category 5--the highest rating on the Saffir-Simpson scale. The Hurricane Center in Miami classified Mitch as the fourth-strongest hurricane to be registered this century. Via the Internet we saw aerial views of the storm which generated growing concern regarding the damages that had occurred on the Bay Islands and the northeast portion of the country. However, up to this point, although it was stronger than previous storms, Mitch appeared to be one more of the many hurricanes that periodically visit the Atlantic coast of the country.

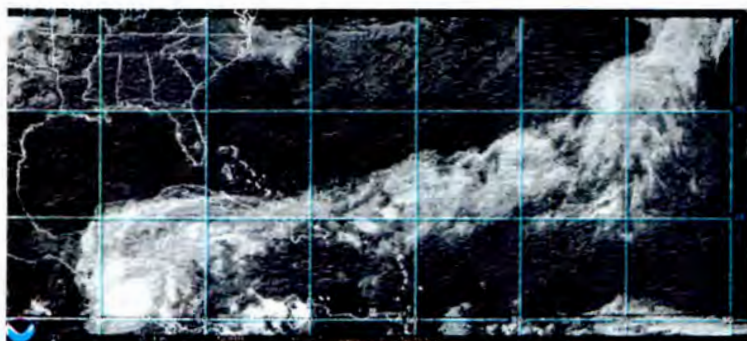
The general expectation was that Mitch would follow a north-northeast course and leave Central America for the northern region of the Caribbean. Hurricanes are more common on the Atlantic coast; historically, serious damage to the interior of Honduras and the rest of Central America has been limited. In fact, younger generations have all but forgotten the damage that has been suffered in the past.

On Wednesday the 28th, Mitch took an unexpected detour towards the south-southeast. As its eye encountered the mountaintops of northern Honduras, Mitch was downgraded to a tropical storm. Like the Shoemaker-Levy 9 comet that crashed in fragments into Jupiter in 1994, Mitch continued to advance along a chain of low-pressure centers that bisected Central America from north to south. During 72 long and distressing hours, Tropical Storm Mitch traversed the entire country.



Dragging with it an enormous mass of water from the Upper Antilles, the hurricane began to form again in the Inter-tropical Convergence Zone, gaining strength in the Pacific and unloading torrential rains on northern Nicaragua, southern Honduras, western El Salvador, and northern Guatemala. Finally, it headed towards the coast of Florida, crossing the region once again over southern Mexico, and gaining strength in the Caribbean. Although disaster prevention and relief organizations and mechanisms have improved much in our countries, it was impossible to effectively prepare the population for the massive damage wrought by this unusual hurricane.

*“The final behavior of natural phenomena is unpredictable and their destructive power is often unimaginable.”*



Tropical Storm Mitch.



Mount Uyuca was barely visible as the storm approached.

### **The first reactions**

The rains from the storm reached Zamorano at about 10:00 p.m. on Friday October 30. Originating from the northeast, they grew in intensity until midnight. By dawn, the institution's basic services were inoperable. El Gallo, the stream that crosses the campus from west to east, overfed by the saturated slopes of Mount Uyuca, carried rushing water across the campus in an unbridled race to the Yeguaré River. From early morning on, Zamorano's personnel paid close attention to the storm's development. The rain did not stop; there was nothing to do but observe the tremendous volume and movement of water.

Still, there was the problem of basic services. The primary concern was how to feed the 800 students at 5:00 a.m., as has been the daily custom at Zamorano since its founding in 1942. The road to the neighboring community of El Jicarito was impassible. The previous night, the strong currents of the swollen stream destroyed the bridge leading to the village as well as approximately 80 homes. As a result, on Saturday the 31st, Zamorano's kitchen staff was reduced to one head cook and four janitors.

There was as of yet no information available regarding the damage in neighboring communities, much less about the extent of flooding in northern Honduras where many students and personnel have family. In reality, there was little time to worry about anything other than the present. Once the initial period of uncertainty passed, actions focused on solving immediate problems replaced other concerns. The day's activities soon united the entire community in an unprecedented fashion.



Views of damage to the neighboring community of El Jicarito.

*“Uncertainty is one of the first reactions to emerge, but action is what will give hope for a better tomorrow.”*



## **Actors and spectators**

One of the few positive results of natural disasters is the united sense of purpose and collective actions that they stimulate in people. At Zamorano there were innumerable examples of very special individual and group actions. Regardless of hierarchy, gender, age or nationality, the vast

majority of the student body, personnel and their families were united in a common task: assuring that this emergency did not turn into a crisis.



Zamorano's administrators and faculty review damage and reconstruction activities.

Feeding the student body and restoring electricity and potable water became the most immediate priorities. It was also necessary to avoid health problems, guarantee personal security, restore transportation channels, assure an adequate supply of food for the medium-term, restore internal and external communication, and attend to all the other details that form the fabric of a small but modern community. Quickly, leadership sprouted like mushrooms in fertile soil.



Students repairing potable water systems.



Many work groups were quickly formed. With minimal orientation, guided only by the common goal of keeping the



institution operational, and animated by their own personal values, both young and old dedicated themselves to restoring the institution to an impressive level of operation. Service at the Student Dining Hall was not interrupted; in the absence of kitchen workers, students immediately took charge. Although the provisions were not quite as abundant as usual on that first morning, students quickly learned how to satisfy the needs of an energetic and extremely active population. Supported by faculty and staff, other students collected and distributed water to student dormitories and faculty and staff residences throughout the campus. They organized garbage collection, medical services, internal road repair, selection and distribution of emergency food rations for neighboring communities, operation of the campus store, and many other activities—too many to list or describe in detail. Students and faculty acted as guides, coworkers and facilitators as was necessary.



A group of students builds a bridge to connect Zamorano's potable water system.

Students serve food to their classmates in the Dining Hall.



Zamorano's educational system is academically rigorous and at the same time stimulates and strengthens discipline, character and leadership in its students. These byproducts of an integral education manifested themselves throughout the long, hard days of work on campus, in the neighboring community of El Jicarito, and in other locations. Doing things right, basing decisions and actions on solid personal values, and giving of oneself to others are principles in an ascending scale that Zamorano strives to develop. The extensive trail of destruction left by Hurricane Mitch provided an improvised yet fertile stage for Zamorano to demonstrate the value of its educational system. Those who offered their talents and efforts and served the community demonstrated that goodwill and hard work conquer all.

As they have since the college opened its doors to them two decades ago, Zamorano's women students demonstrated unequivocally that they are equal to their male classmates in terms of their skills, capacity to work and dedication. Their performance during Mitch underscored the growing role of Latin American women in professional fields and their essential contributions to the development of our countries.

Careful and objective analysis of these events affirms that Zamorano will continue to harvest effective leaders. And this class, unlike any other class of Zamoranos, will have the singular distinction of having nobly confronted a hurricane.



Students conduct laboratory analysis.

*“The personal response to emergencies is positive and serves collective needs; why not act the same way in normal times?”*

## The value of preparation

Zamorano was established more than a half century ago far enough away from the city to be able to develop a truly unique model of education. The institution maintains an expansive educational, productive, and service-oriented infrastructure. The 15,000-acre facility requires constant attention and dedication of students and a wide range of



Students at work with Mount Uyuca in the background.

personnel. Zamorano's potable water and electrical systems extend many kilometers, serving various production facilities, food processing plants, laboratories, classrooms and residences. Zamorano is more like a small modern city than a normal college campus. Still, despite the fact that Zamorano has the human and other resources to confront unusual problems and limitations, Hurricane Mitch imposed conditions on the institution and the countries in the region that were simply unimaginable.

Mount Uyuca has been cared for and managed by Zamorano since 1948. The institution's founding director, Dr. Wilson Popenoe, acquired part of the mountain to "teach city people about the forest and to preserve it as a biological reserve for posterity." Over the past half-century, Zamorano's



4,500 graduates from 26 countries have contributed to restoration and maintenance of the reserve. Today, the Uyuca Biological Reserve is considered to be the most effectively managed reserve in Honduras. Despite Uyuca's great capability to absorb and store water, its green mountainsides were unable to handle the enormous quantities of water unleashed by the tropical storm. Mudslides soon formed,

sweeping away anything in their paths, including parts of the highway to Tegucigalpa, numerous homes bordering rivers in neighboring communities, Zamorano's potable water system, and part of the electrical and telephone systems.



Damage to El Jicarito's electrical system.

Student and faculty teams, oftentimes in conjunction with community members, restored these basic services in just a few days. Not a single student was injured seriously; the only critical injury reported was to a member of Zamorano's support staff who was helping to restore electricity in his community. Overall, the effects of Mitch oblige Zamorano and the countries of the region to rethink their disaster preparedness and relief systems with a view towards the future. Failure to do so would be to gain nothing from a very costly lesson.

*“Foresight is indispensable, but a dose of common sense and flexibility is also necessary.”*

## **Group work or individual heroism**

The value of organized action was demonstrated during the days following the storm's passage through the region. The rapid integration of students was the first step towards assuring efficient attention to immediate priorities and the effective distribution of available resources. Students established and managed an Information Center that coordinated many activities, such as ordering food and assuring the necessary logistical support needed by work teams and the community as a whole.



Student Information Center.

Academia often fosters a culture that breeds isolation and rewards scientific heroism and individual pedagogy. It is understandable that exploring knowledge, particularly in highly specialized institutions, results in a sense of individualism that penetrates one's personal life. The organization and structure of Zamorano permits a multicultural community to live, learn and teach at a level of efficiency and productivity that is uncommon in the academic world. At the same time, however, the Zamorano system is hierarchical and learning is very systematized. Departing from the daily routine and confronting an entirely new and critical situation provided a true test of our system.

Although assignments and objectives changed radically from evening to dawn, the overall response of the community was notable for its high level of cooperation, teamwork and shared responsibilities. There were no hierarchies other than those formed by good ideas and exemplary initiative. Working as teams, students and employees established an improvised but effective system of potable water, while other groups attended to additional priority needs of the institution and the community. Once decisions were made, students and employees from all levels of the institution turned them into personal commitments. Actions, values, and a sense of service fed the common effort. Zamorano was truly a society based on shared values and goals that quickly achieved practical results to meet a challenge that could have been a crisis, but instead became an opportunity.

*“Community organization is essential,  
because an isolated response is impossible  
and useless.”*

### **Communicating-by-saying or communicating-by-doing**

One of the first impacts of natural phenomena is the loss of normal channels of communication. The rhythm of life is suddenly interrupted, making it impossible to know exactly what has happened and what should be done. Luckily, Zamorano is a compact community and it was relatively easy to inform its members of the situation, the possible consequences, and the priorities for action.

The first objective of communication was with students, who are the reason the institution exists, and at the same time its most important resource for dealing with a challenge of the magnitude of Mítch. A large group of teaching and service personnel quickly joined students in the various tasks, providing the powerful message that the work was to be shared by all. The focus of all activities centered on the students. As a result, the experience became highly educational. The message to employees was to work alongside the students, but without telling them what to do. These activities demonstrated the need for action-based leadership in times of crisis. This is equally true in normal times.

It is inevitable that in a community confronting a collective challenge, the lack of information and even misinformation manifest themselves in different ways. The international news media transmitted throughout the world painful images of a devastated country. Damage to Zamorano was relatively minor, but the demand for information was immediate and extended from southern Chile to the United States. In the days following the storm, Zamorano disseminated positive messages via its International Graduate Association. Internally, information was distributed at information sessions used to plan, evaluate and guide activities on campus. Employees living in Tegucigalpa were informed by radio to spend the week following the storm attending to the needs of their families and the city. Communication was reestablished with the neighboring community of El Jicarito, home to the majority of Zamorano's support personnel. Zamorano assured the village of its solidarity and its intention to contribute to the reconstruction of the community as soon as its own house was in order. Despite these efforts to communicate, for several days there continued to be considerable concern on behalf of friends and family members regarding the situation on campus. It seems

that effective communication needs to be as abundant as the torrential rains of a hurricane.



*“Just as nature has the ability to destroy, communication has the power to relieve.”*

Communicating-by-doing with students.

## Harvesting leaders

Zamorano’s student body is comprised of young Latin American men and women who come from Andean highlands, lowlands, small villages and great cities. Their socioeconomic backgrounds are as varied as their diverse accents. However, within this great diversity, all students share certain goals and common ideals. Among these is the desire to prepare themselves as well as possible at Zamorano and to return to serve their countries.

Once students are incorporated into the Zamorano system, they wear uniforms that symbolize equality. Personal recognition at Zamorano is derived solely from the merit of an individual’s performance. Daily life starts before sunrise and



Zamorano’s diversity.



continues well into the evening. Students celebrate Labor Day by working, and academic activities have never been interrupted by strikes or student unrest of any kind. Zamorano's academic rigor prepares many graduates for success in graduate programs at many of the world's finest universities. Others are at work in a wide range of activities throughout the Americas. For the most part, Zamoranos are successful professionals and represent the best proof of the effectiveness of this unique system of integral education.

Many of the young people entering Zamorano come from backgrounds in which they were not intellectually challenged during their adolescent years. With few exceptions, Latin American secondary education does not emphasize analytical thinking or proactivity. Mathematics, physics and chemistry are constant weaknesses of



Zamorano maintains a high-quality academic environment.



rural and many urban youths. At the same time, Zamorano demands constant dedication and intensity during 45 weeks of the year. It maintains a highly demanding system from the student's first day on campus. After just a few months, students learn to adapt to a fast-paced daily life that is filled with responsibilities and requires effective time management skills. Under this system, students mature very quickly.

The overall response of Zamorano students to the impacts of Hurricane Mitch demonstrates that they are capable of accepting challenges, efficiently organizing themselves, and effectively applying their knowledge to solve problems and work as a team. Moreover, their behavior also clearly demonstrates the values of service and solidarity with those in need. It is important to remember that these qualities and mega-skills are precisely what the workplace requires of the modern professional.

Each class and generation of Zamoranos since 1946 claims that it is the best. In reality, every class has been very good and its members have applied themselves well. The same can be said for the present generation of Zamoranos. They will be more skilled with computers and information processing, but no less enterprising or hard working than their predecessors were. These young graduates are entering a special family of Pan-American professionals. And they will be able to say that they confronted a hurricane.

*“The ideas and actions of young people permit them to confront challenges of the present and see tomorrow with optimism.”*

## **Privileges and responsibilities**

Honduras has struggled with poverty since its birth as a republic. Along with Nicaragua, it is among the poorest countries of the continent, as reflected by data on income, nutrition and health. Recently, following a lengthy period of macroeconomic adjustment, the country began to experience more sustained economic growth, despite a high population growth rate that creates an extraordinary need for investment in education and other social services. Little hope exists for the development of a country without providing its young



population the two means of achieving social mobility: education and employment. Presently, the effects of the hurricane require that the nation's attention focus on survival, and then reconstruction. In this sense, the present generation is being robbed of many opportunities for change and social progress.



A damaged house in El Jicarito.

Distributing food rations to families affected by Mitch.



Hurricane Mitch caused significant damage in Central America. The financial resources of the affected countries are limited. International assistance, which has been generous and opportune, is available to the affected countries for immediate help in addressing the most pressing needs. Assistance for longer-term reconstruction and reactivation of productive capacities will also be critical. Overall, however, the effects of this hurricane represent a significant setback for the economic development that Honduras has achieved over the last two generations. Resources will be insufficient to satisfy growing social demands, which were already overwhelming before the hurricane. The poor, particularly those living in rural communities, will be the most seriously affected.

Our society has very limited economic resources. The primary sources of energy are hydroelectricity and firewood. Production generally has low value-added and is subject to the vicissitudes of international markets. The scarce national capital that is available is largely directed at servicing the country's external

debt and importing foreign consumer goods. In facing the enormous challenges that Hurricane Mitch left us, agriculture will be a crucial factor in reactivating the Honduran economy and creating opportunities for other sectors of the economy. The rural



Work conquers all.

sector should no longer be responsible for subsidizing urban areas. Now, more than ever, it is necessary to redouble efforts to assure education and basic services in the countryside, lessen agricultural pressure on watersheds, strengthen small- and medium-scale rural businesses, and increase the leadership role of women.

How can these goals be met? The histories of countries that have achieved development from levels of poverty equal to or below that of Honduras reveal two clear ingredients: work and austerity. Under present circumstances, every citizen in the countries most seriously affected by Mitch has no choice but to rethink the way he or she does everything. The affected societies require the utilization of available personal and national resources in an efficient, rational and equitable manner that is consistent with the new and pressing reality.

In Zamorano, working hard and intelligently is an institutional principle. In the days after the hurricane, the community demonstrated that it is capable of conducting its activities with austerity. With limited access to potable water,



Zamorano's production fields.

the community organized conservation efforts and efficiently utilized its modest reserves. Internal transportation was organized to maximize conservation, while effectively completing necessary tasks. Collaboration with neighbors and road construction companies facilitated shared use of heavy construction equip-

ment. Food provisions were made available to employees at all levels of the institution, including employees from Tegucigalpa and relief shelters in neighboring communities. If these examples from a small community like Zamorano were applied to the thousands of productive activities and services of a country, one can see the potential to transform a national crisis into a tremendous opportunity.

Now more than ever, the citizens in our countries who have greater opportunities and incomes must exercise maximum creativity and work intelligently and efficiently to create employment and generate capital and national savings. Today more than ever, there is a need for austerity, especially among the more privileged sectors of society, in order to create a sense of solidarity and to share with the less fortunate. Failure to do so will leave the country with little hope for recovery or peace.



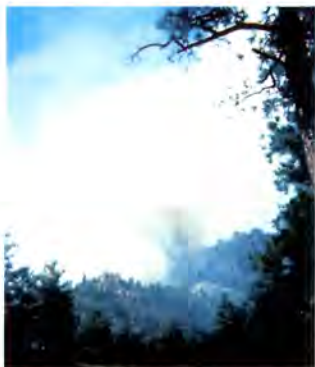
*“In times of crisis we can get by fine with much less than we are accustomed to; why not also in times of tranquility?”*

## **Creating the future**

When Wilson Popenoe acquired Mount Uyuca for Zamorano 50 years ago, he probably did not imagine that his wish to preserve a biological reserve for future generations would also one day save the lives of entire families that now live at the foot of this beautiful mountain. Similarly, the thousands of professionals formed in Zamorano who as students helped over the years to plant and care for the forest during the dry summer seasons did not think that their sweat would one day represent life for many people. And the numerous community brigades, created and trained by Zamorano to prevent and combat forest fires, also could never have imagined how their voluntary actions and initiative would save the lives of their friends and relatives in El Jicarito. There is no doubt that the waters that rushed down the sides of Mount Uyuca would have reached even greater volumes and gathered greater destructive force were it not for the forests that cover its rough and rocky slopes.



Dr. Wilson Popenoe, Zamorano's founding Director.



A forest fire in the Yeguaré Region.

In the final analysis, the damage caused by Hurricane Mitch has much to do with the chronic deforestation of watersheds in our countries. We think that we are able to dominate nature, increasing our debt to the environment with indiscriminant destruction of forests and contamination from pesticides and other forms of pollution. When it comes time to pay the bill, nature charges high interests and does not listen

to excuses. Zamorano must continue and extend its efforts in educating and putting into practice the concept of sustainability.

Honduras and Nicaragua are bonded not only in poverty, but also by the fact that they are the countries with the highest agro-ecological potential in the region. Agriculture is the sector that has the greatest potential to recover from economic calamities, in addition to requiring less investment per job created and contributing directly to providing a country with food. Zamorano now has a greater and more urgent role to play in providing support to this sector, and has the high-quality resources to do so. Zamorano is one of the few institutions in the region that effectively generates knowledge and technology that is applicable to agricultural production and transformation. It has demonstrated that it is capable of supporting and fostering the development of independent small- and medium-scale rural enterprises. Its



A student combats a forest fire.

strong ties to centers of academic and scientific excellence in the developed world give Zamorano additional depth that benefits all its activities.

Institutional stability, administrative agility, and a non-sectarian approach have given Zamorano the credibility necessary to conduct long-term, sustained programs to help restore and improve productivity at the national and regional level. The presence in Zamorano of many students from the countries affected by Mitch provides an invaluable opportunity to develop human resources that are highly sensitive to the needs of these countries and capable of contributing to the development of production and agroindustry in a highly competitive environment. In addition, Zamorano possesses one of the finest educational facilities and faculties in the region. Zamorano is an asset that Honduras and Nicaragua cannot ignore.

The ultimate goal of Zamorano is to contribute to improving the living conditions in the countries it serves. Many of its activities are oriented towards improving the livelihood of rural families. The institution presently coordinates the Yeguaré Region Sustainable Development Program, a long-term initiative that involves 72 villages, six municipalities and over 50,000 inhabitants. Here, the idea of achieving sustainable development through community organization, the generation of capital and rural education is being systematically put into practice by Zamorano with encouraging results. Now more than ever, Zamorano must share its experiences and lessons learned to promote sustainable development beyond the Yeguaré.



The Yeguaré Region of Honduras.



*“The capacity to take care of itself is a sign of the strength of an organization, but its final value is derived from its ability to serve society.”*

## Lessons from the hurricane

Day-to-day life in Zamorano helps students to acquire knowledge, understand processes, and develop personal habits, values and leadership skills. Zamorano’s integrated approach provides students the opportunity to learn constantly both in and outside the classroom. During their four years of study and learning-by-doing, students improve their knowledge, skills, values and leadership capabilities. The teaching staff provides a formative environment that gradually develops the students to the point that they are qualified young professionals prepared to continue to learn and serve throughout their lives. Hurricane Mitch provided the institution with an unprecedented opportunity to combine knowledge, skills, human values and the call to service in a unique, real-life, large-scale, intense experience. As great as the threat was, so too was the opportunity to learn.

The tropical storm created a complex situation for the entire region. The lack of basic services, problems related to food supply, health issues, the need to restore communication systems, emergency relief assistance needed in neighboring communities, and the challenges related to managing information, put the institution to the test. As an academic community, it was necessary for Zamorano to quickly begin a process of analysis and reflection. Teams



Students, faculty and field workers combine their efforts.



of students and teachers began to evaluate the ecological, hydrological, productive, economic and social aspects of damage caused in and around Zamorano. Their analysis and action plans will form an important part of medium- and long-term reconstruction efforts.

Following this phase of planning and analysis, Zamorano must intensify its production of foodstuffs and provision of services. The national and regional agricultural sector has been debilitated and will need seeds, knowledge and services in much greater quantities than before. Zamorano plays and must continue to play a leading role in developing and disseminating technology related to the production of basic foodstuffs, such as dry beans. Additionally, the reestablishment and strengthening of small- and medium-scale rural enterprises will require additional technical assistance in areas such as organization, value-added processing, market systems and financial management. There is an urgent need for Zamorano to do more and, along the way, to learn more.

Honduras, perhaps more so than other countries in the region, cannot allow for continued ecological degradation such as the deforestation of its mountains and environmental contamination that leads to personal and collective unhealthiness. The arduous task of national reconstruction must integrate improved environmental management. Since 1948, Zamorano has understood and demonstrated that in the end, the value of sustainable resource utilization is measured in human lives. Zamorano has the experience to make important contributions in the area of sustainable natural resources management.

Zamorano offers professional degrees in Agricultural Science and Production, Agroindustry with an emphasis on Food Technology, Agribusiness, and Social Development and the Environment. These programs were designed to help keep the region on the path of progress during normal times. In the aftermath of Mitch, these careers are more relevant than ever.

Lack of food, scarcity of capital, and ecological decay may be more apparent now, but they have always been problems submerged in the depths of our reality, like the base of an iceberg. Human capital determines the essence of a nation. Just as the countries affected by Hurricane Mitch must reconstruct higher quality bridges and homes, they must also attempt to improve their human infrastructure, particularly in high-priority professional fields. In this way, it will be possible to accelerate the process of recovery and be better prepared for the next hurricane.



Production, processing and marketing at Zamorano.



Finally, like all the villages affected by Mitch, the entire Zamorano community should reflect on and reaffirm its own behavior, sharing the fruits of its austerity and lessons learned, and broadening

the institution's impact. Zamorano should prepare itself better for future natural emergencies, increase the efficiency with which it uses its resources, look for ways to achieve greater impact in rural communities, and contribute tirelessly to the development of society in general. We must constantly remind our students that the world needs them to be effective actors, as well as remind ourselves that Zamorano's central responsibility is to continue to form leaders for the future.

*“Each day we learn something new in doses, but during crises we are given the opportunity to learn in torrents.”*

## Epilogue

A week after the events described in this essay, life has for the most part returned to normal at Zamorano. The lawn is mowed, basic services are functioning, agricultural activity has resumed and classes are



A view of the central campus.

underway; if you don't look too closely, it would be very difficult to believe that what I have narrated here actually occurred. However, there is a new feeling on campus that is evident to those who know the institution. Students and many faculty and staff carry themselves differently. Some would say it is a sense of having met a challenge, or maybe the satisfaction of having served others. Perhaps it is a resolution to make better use of one's time and to prepare oneself more effectively, or the desire to return to one's native soil to transform it into something better. Maybe it is the desire to share more, or a true understanding of the value of austerity. Time will tell...

In all of Honduras, society has mobilized on a large scale in an effort to save lives, restore material losses, and, in the words of its President, “to create a better country.” This monumental task will take many decades; throughout the process, Zamorano will be ready to contribute with the values and attitudes that it demonstrated during the week of Hurricane Mitch.

## **Zamorano's Mission**

Zamorano is a Pan-American center of higher education dedicated to providing a first-class, integral education in sustainable tropical agriculture, agribusiness, agroindustry, natural resources management and rural development.

The foundations of this education are the principles of Pan-Americanism, learning-by-doing, academic excellence, and character and leadership formation.

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If you would like to contribute to the integral formation of high-quality human resources for the countries affected by Hurricane Mitch, please contact:

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