

2.4.3 Barasan

The community's main sources of income are farming (about 260 ha), aquaculture (about 30 ha) and fishing. All farmland is irrigated. As with Balud, not all farmers own the land they till. Farmers provide all farm inputs, landowners receive 15 sacks of palay from the first crop and none from the second crop. Fields at the end of the irrigation system face water shortage during the second cropping (January and February).

About 2 percent of households own farmland and a fishpond. One respondent said that he has 0.5 ha for rice farming and 1 ha for fish farming and that fish farming provides more income than rice farming. He can harvest fish three or four times per year, for a net income of about PHP18 000 per harvest. He said that converting a field from rice to fish farming is possible only if the rice field is close to the river so water is available to fill the pond.

Fishing in municipal waters can bring an additional PHP1 000 per week. Fishing is favourable when a tide of about 1.5 m brings in fish and shrimp.

The average family size in Barasan is seven people. Barasan households are more affluent than those in Balud and are able to support a large family.

The community is vulnerable to high typhoon winds that affect their dwellings and rice crop. The community is not vulnerable to riverine flooding. A flashflood in May 2003, following three days of continuous heavy rains, caused heavy losses for fishpond operators. One respondent said that he lost his entire fish crop, amounting to PHP35 000, and had to borrow PHP8 000 (at 8 percent interest) to start again. Of the 60 fishpond operators, about 50 percent are able to finance replacement costs. The May 2003 flood was a shock to most residents, as they were preparing for their children's schooling, which starts in June.

Collectivity is a strength of the community. Residents formed a *barangay* power association that bargained with the electric power provider. The association collects power consumption information and payments from residents. They get a 3 percent rebate for full payment of bills.

2.4.4 General vulnerability features

The livelihood patterns of most of the rural households in the study area, particularly in Balud and Maquina, are fragile. The seasonal income gaps are often bridged by loans of varying interest rates from different sources. Because of collateral requirements, loans from organized institutions, such as banks, usually go to the wealthier and middle-income groups in rural communities. Poorer community members are forced to borrow money from relatives without interest or at high interest from local money lenders. They use this money mostly for unanticipated expenditures such as medicine for sick family members. While everyday risk is a constant threat to livelihoods, periodic weather-related shocks keep the livelihood systems continuously swinging between crisis and recovery.

Most vulnerable households within the community are forced to live on the edge of the Jaluar River in poorly constructed, fragile houses. In fact, the degree of household vulnerability is visibly apparent in the location and quality of homes.

Floods with strong currents, caused by dike breaches, high winds or sea surges, are quite destructive. They pose danger to human life and also may destroy property and livestock (particularly smaller livestock such as pigs and chickens), and damage irrigation and public infrastructure.

Less violent floods that inundate large areas for long periods may be less immediately devastating but they have severe economic and social impacts. Long-standing floodwaters damage crops and property, can make household articles unusable and weaken house structures. Livestock that survive the flooding still may succumb to disease outbreaks that often occur following the floods. If food stocks stored in the house are ruined, food security may be threatened until the next harvest.

2.5 Disaster risk management

This section presents an institutional profile of actors actively involved in disaster risk management (DRM) in the Philippines. The section presents a bottom-up perspective, starting with local-level profiles and then describes the formal DRM system.

2.5.1 Local institutions involved in DRM

2.5.1.1 Social institutions in the community

Real kinship

Personal alliance systems can consist of kin, both biological and ritual, grantors and recipients of favours, friends, or partners in commercial exchanges. However, as elsewhere in the country, these systems are anchored by kinship, beginning with the nuclear family. Kinship starts with the immediate, nuclear family, then extends by affinity and consanguinity to include a large number of people including aunts and uncles and their relatives, in-laws and their relatives, etc. Closeness in relationships depends very much on physical proximity.

Ritual kinship

Ritual kinship is established through godparenthood or sponsorship that grows out of three ceremonial occasions: baptism, confirmation and marriage. It creates personal alliances from which one can expect help in the way of favours such as jobs, loans or just simple gifts on special occasions. In asking a friend to become a godparent to a child, a Filipino is also asking that person to become a closer friend. Thus, it is common to ask acquaintances who are of higher economic or social status than oneself to be sponsors. Such ritual kinship can be depended on in moments of crisis, but not to the same extent as real kinship.

Utang na loob relationships

Personal alliance is also formed between a grantor and recipient of favour based on the concept of *utang na loob* (debt of goodwill). Although it is expected that the debtor will attempt repayment, it is widely recognized that the debt (as in one's obligation to a parent) can never be fully repaid and the obligation can last for generations. Saving another person's life, providing employment or supporting a young person's education are "gifts" that incur *utang na loob*. These gifts initiate long-term reciprocal interdependency in which the grantor of the favour can expect help from the debtor whenever the need arises and the

debtor can, in turn, ask other favours. This traditional value remains strong in rural communities.

Suki relationships

Suki (market exchange) relationships develop between two people who agree to become regular customer and supplier. In the marketplace, Filipinos buy regularly from certain suppliers who, in return, give them reduced prices, good quality and, often, credit. Regular patrons often receive special treatment in return for their patronage. Trust is vital and often these marketplace relationships blossom into genuine friendships.

Patron-client relationship

Patron-client bonds maybe formed between tenant farmers and their landlords or when a patron provides resources and influence in return for a client's personal services and general support. The reciprocal arrangement typically involves the patron providing a means of earning a living or of help, protection and influence, and the client providing labour or personal favours, ranging from performing household tasks to political support. These relationships often evolve into ritual kinship ties, as the tenant or worker may ask the landlord to be a child's godparent. Similarly, when favours are extended, they tend to bind patron and client together in a network of mutual obligation or long-term interdependency.

Friendships

Friendship, often placed on a par with kinship, is the most central of Filipino relationships. A willingness to help one another provides the prime rationale for the relationship.

Interpersonal relationships form an alliance system

All of these interpersonal relationships are components of a Filipino's personal alliance system. Thus two individuals may be cousins, become friends and then cement their friendship through godparenthood. Each of their social networks will typically include close or distant relatives (consanguine or affine), ritual kin, one or two patron-client relationships, one or more close friends, a large number of social friends, and a dozen or more market-exchange partners. *Utang na loob* may infuse any or all of these relationships. In all, a network of social allies can include 80 or more people, integrated and interwoven into a personal alliance system. This provides a dependable social net that can be depended on in times of crisis.

Pakikipagkapwa

Pakikipagkapwa is a Filipino trait where individuals extend an act of kindness or goodwill to other persons for whom they have compassion or with whom they identify.

Bayanihan

Bayanihan is the spirit of community volunteerism. Community members combine their strengths or resources to help a person or a family in need. This can mean support during harvests, when a house damaged by typhoon needs repair or in times of crisis. It edifies cooperation and solidarity.

2.5.1.2 Non-governmental organizations (NGOs)

Dumangas Fisheries and Aquatic Resources Management Council (FARMC)

The Dumangas Fisheries and Aquatic Resources Management Council was organized in July 2002 (Administrative Order No. 196, series 2000) to institutionalize the role of fishermen and other resource users in planning and formulating of policies and programmes for the management, conservation, protection and sustainable development of fisheries and aquatic resources. FARMC acts as a consultative body of the municipal government on fisheries-related issues and concerns, facilitates the *Bantay Dagat* Programme (coastal resources watch) in the *barangays*, and monitors fisheries operations in the municipality relative to the environment, zoning ordinances and other local laws. It has responsibility for conducting coastal and river cleanups and plays a key role in disaster management by undertaking crucial activities before, during and after a disaster.

Pre-disaster activities begin with informing the community of impending disaster, and advising:

- fishpond operators to temporarily cease operations,
- fishermen to stow fishing gear and strengthen their residential and fishing structures,
- community residents on what to do and where to go in times of disaster.

Disaster-response activities include assisting in:

- evacuating flood victims from river banks and coastal areas using *bancas* (small fishing boats),
- *barangay*-level rescue operations in coordination with/support to the Dumangas Rescue and Emergency Assistance Movement (DREAM),
- distributing relief assistance in coordination with the *barangay* council.

Post-disaster activities include:

- providing assistance, in the form of labour and provision of food for labourers, to fishers who need help rehabilitating their fishing operations;
- providing food and medicine to worst affected fishers and their families;
- responding to requests for assistance from the Bureau of Fisheries and Aquatic Resources and providing fishing gear to the worst affected fishers.

Irrigators' Association

The Tamboilan-Paloc Bigque-Bolilao Irrigators Association (TAPABIA), organized in 1991 in coordination with the National Irrigation Administration (NIA), addresses disputes among farmers on water distribution issues and airs farmers' grievances to the NIA and to the municipal mayor. Its functions include the following.

- Regular clearing of irrigation facilities (lateral canals)
Funding support from NIA (PHP1 400 a month) is deposited in the association's account and used for travel and meeting expenses.
- Collection of irrigators' service fee (ISF) from NIA concessionaires.
The association keeps a percentage from the amount it remits to NIA, if remittance is at least 75 percent of the total amount due.
- Arbitration services to settle disputes for its members.
If unable to resolve the dispute, the matter is referred to the Punong *barangays*.

Each *barangay* under TAPABIA is divided into five total service areas (TSAs), each with a chairman responsible for disseminating warning in his/her area. It also has key roles to play before, during and after a disaster.

Pre-disaster phase:

- reinforce dykes and make them higher to withstand higher flood levels,
- ensure that rice/palay storehouses are elevated,
- disseminate flood warnings to constituents to enable them to prepare for the flood,
- open the irrigation drop to drain water upon receipt of flood warning,
- advise members to seal field openings to prevent water logging in the rice paddies and to move hand tractors to higher ground.

Response phase:

- help monitor the flooding situation,
- assist in evacuation.

Post-disaster phase:

- clear paddies and irrigation canals of debris,
- assist members in need of assistance (e.g. reconstruction of damaged dwellings),
- report crop damage to the Philippine Crop Insurance Corporation for assessment and possible extension of assistance,
- report crop damage to the municipal agriculturist for certification of crop damage to enable deferment of NIA payment,
- lobby for the extension of possible local government assistance to affected farmers.

Kabalikat Civicom Association, Inc.

The Dumangas Kabalikat Civicom Association was established in January 2000 as local Chapter 215 of the nationwide Kabalikat Civicom Association of radio communicators. Chapter 215, with a current membership of 42, serves as a support group for the Intercontinental Broadcasting Corporation's Radio Budyong Iloilo – Station DYBQ-AM – an Iloilo city-based radio station. It is an accredited NGO in the municipality along with other special municipal bodies such as the Municipal Peace and Order Council and the Municipal Disaster Coordinating Council (MDCC).

Its regular activities include nightly net calls and programmes; assistance to the municipal government in disseminating information of important programmes, projects and activities; monitoring of and assistance to travelers; assistance to the municipal government in the implementation of projects in its capacity as member of the local special bodies; and other duties such as tree planting, and coastal and river cleanup. Its role in disaster management includes the following.

Pre-disaster phase:

- monitoring hazards and reporting to the municipal mayor for establishing appropriate actions (the group is divided into sub-groups that are assigned areas of responsibility for monitoring),
- providing early warning of impending hazard through the municipal/*barangay* officials,
- disseminating warnings, reports, updates and advisories through DYBQ AM radio,
- preparing floats for use during evacuation.

Response phase:

- assist DREAM and MDCC in rescue operations by volunteering as drivers, guiding evacuees during evacuation procedures, etc.,
- monitoring situations and informing appropriate agencies,
- volunteering vehicles for transportation of relief goods, medicine, clean water, etc.,
- assisting in relief distribution.

Post-disaster phase:

- assist the municipal government in consolidating a damage report,
- assist in medical missions to transport medicines,
- donate and disseminate food items and clothing to disaster victims.

Dumangas Rescue and Emergency Assistance Movement (DREAM)

The municipal government established DREAM in July 1999. It is designed to:

- provide active and sustained support to the MDCC in the areas of emergency preparedness and response, vulnerability reduction and disaster risk control,
- respond quickly in times of disaster,
- monitor and report on any disaster situation and recommend appropriate measures to the MDCC,
- participate in programmes, projects and activities of the municipal government.

Registered as an NGO, DREAM currently has 36 volunteer members, including four women, who are trained in search and rescue. It covers six flood-prone *barangays*. Their expertise in search and rescue as well as in hazard monitoring, information dissemination, relief operations, medical missions and damage assessment have been put to test in flooding incidents associated with typhoons since 2000. DREAM also provides search and rescue in marine navigation accidents, such as the sinking of the fishing boat FV Angelica with 24 crew at the Guimaras Strait in September 1999. In non-disaster times, DREAM is involved in activities aimed at reducing risks for floods, such as river and coastal clean-up and reforestation.

DREAM is a member of the Local Special Bodies. Its financial support is provided by the Municipality of Dumangas.

Civic and Religious Organizations

The municipal government has agreements with civic and religious organizations to assist, in the spirit of volunteerism, in relief and rescue during emergencies as well as to participate in the formulation of the Municipal Disaster Preparedness Plan. They include:

- Rural Improvement Club – a women’s civic organization,
- Rotary Club of Dumangas – a civic organization,
- Knights of Columbus – a religious organization.

In addition, the Catholic Parish Pastoral Council Church supports relief operations by providing financial resources to the BDCC.

Municipal Economic Council – a private sector business consortium

The Municipal Economic Council, created by the Municipal Executive Order No. 31 in 2000, is chaired by the municipal mayor. It is co-chaired by representatives of business proprietors engaged in rice retailing, groceries, pharmacies, dry goods, fuel stations and construction supplies. All accredited business proprietors in the Dumangas Public Market are members of the Council. The Council advocates programmes, projects and activities that foster municipal economic growth and development. It also recommends policies to the Municipal Mayor and the '*Sangguniang Bayan*' that can enhance the operations of the business sector as well as benefit its clientele. Its key role in times of disaster is to provide, on loan, goods and items required for disaster response.

2.5.2 The National Disaster Risk Management System

The Philippine government, from pre-Commonwealth days until today, has supported a scheme to counteract the effects of disasters, both natural and human-induced. The 1978 Presidential Decree 1566, "Strengthening the Philippine Disaster Control and Capability and Establishing the National Programme on Community Disaster Preparedness", is the country's basic law on disaster management. It lays down a policy and institutional and operational framework for the country's disaster risk management system.

From this legal mandate, the National Calamities and Preparedness Plan approved in 1983 was revised in August 1988 and issued together with Implementing Rules and Regulations to P.D. 1566. An updated Calamities and Preparedness Plan has been submitted for approval of the National Disaster Coordinating Council. Efforts have been made since the mid-1990s to update and amend P.D. 1566. This Bill, now called "Philippine Disaster Management Act of 2003", has received comments from key stakeholders and is with the House Committee on Defense for consideration of the legislators. While the updated legislation is pending, functional institutional and operational arrangements have been set in place.

Policies for National and Local Disaster Risk Management

P. D. 1566 lays the following policies disaster risk management at all levels.

- Responsibility for leadership rests on the provincial governor, city/municipal mayors, and *barangay* chairpersons, each according to his/her area responsibility.
- Self-reliance shall be developed by promoting and encouraging the spirit of self-help and mutual assistance among the local officials and their constituencies.
- Each political and administrative subdivision of the country shall utilize all available resources in their respective areas before asking for assistance from neighbouring entities or higher authority.
- Primary responsibility rests on the government agencies in the affected areas in coordination with the people themselves.
- All government departments, bureaus, agencies and instrumentalities are responsible for documenting plans for their emergency functions and activities.
- All national government offices in the field shall support the operations of the local government in times of emergencies and according to their level of assignment.

Key Actors: Disaster Coordinating Council Network

The Disaster Coordinating Council Network, proposed to be called Disaster Management Council in the Disaster Management Act of 2003 and the updated Calamities and Preparedness Plan, offers a multisectoral, multiagency and multilevel approach to disaster risk management. Coordinating Councils and Disaster efforts are supported by the government and the private sector. Operations Centres exist at all governmental levels including (Figures 5, and 6)

- National Disaster Coordinating Council (NDCC)
- 17 Regional Disaster Coordinating Councils (RDCC)
- 79 Provincial Disaster Coordinating Councils (PDCC)
- 114 City Disaster Coordinating Councils (CDCC)
- 1 496 Municipal Disaster Coordinating Councils (MDCC)
- 41 960 *Barangay* Disaster Coordinating Councils (BDCC)

The NDCC is the highest policy-making, coordinating and supervising body for disaster management. It advises the President on the status of the national disaster preparedness programme, disaster operations and rehabilitation. Membership of the NDCC, chaired by the Secretary of National Defense, consists of almost all cabinet members plus the Secretary-General of the Philippine National Red Cross. The Office of Civil Defense (OCD) provides the operations centre and secretariat functions as well executive-director functions through its administrator.

The NDCC is replicated in regional and local coordinating councils that function substantially like the NDCC, except that they operate and utilize their own resources at their respective levels. The RDCCs and the local DCCs constitute the core of the disaster management system. It is at this level that emergency is most felt and protection, rescue, evacuation, relief and rehabilitation operations are launched and carried out. The DCCs are expected to be proactive, with activities such as dissemination of information on natural disasters and disaster preparedness, identification of evacuation centres, upgrading of evacuation centre facilities, and assignment of responsibilities to member agencies during emergencies.

NDCC members include almost all of the Cabinet Secretaries.

- **Secretary, National Defense – Chairman**
- Secretary, Interior and Local Government – Member
- Secretary, Public Works – Member
- Secretary, Health – Member
- Secretary, Social Welfare – Member
- Secretary, Agriculture – Member
- Secretary, Education – Member
- Secretary, Finance – Member
- Secretary, Labour and Employment – Member
- Secretary, Trade and Industry – Member
- Secretary, Transportation and Communication – Member
- Secretary, Science & Tech. – Member
- Secretary, Budget – Member
- Secretary, Justice – Member

- Secretary, Environment and Natural Resources – Member
- Director, Philippine Information Agency – Member
- Sec-Gen, Philippine National Red Cross – Member
- Chief of Staff, Armed Forces of the Philippines – Member
- Administrator, Office of Civil Defense – Executive Officer

The updated Calamities and Disaster Preparedness Plan proposes to also include these Cabinet members and officials as members of the NDCC:

- Secretary, Department of Science and Technology (DOST)
- Secretary, Department of Foreign Affairs (DFA)
- Secretary, Department of Tourism (DOT)
- Director-General, National Economic and Development Administration (NEDA)
- Office of the Press Secretary
- Presidential management staff

Figure 4. Organization of the DCC

