

Financing the Adaptation Responses: Case of Disaster Mitigation in Viet Nam

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1. Introduction

Natural disasters have negative impacts on not only a country, but the entire world. Consequences of natural disasters are severe, visible, but unpredictable. Recent studies more than suggest that climate change will create more natural disasters and they will be more severe. Therefore, we need to prepare.

To date, natural calamities and catastrophes have tormented for Viet Nam's people. Every year, natural calamities, mostly water related types such as floods, storms and droughts, end hundreds of human lives and cause losses of millions of USD. On average, Viet Nam annually suffers about 6-10 storms, tropical depressions and floods that occur suddenly in a large area with different frequencies¹.

Natural disasters lead to a diminished economic growth rate and erase achievements of hunger eradication and poverty reduction. *As to enterprises*, natural disasters delay their production and business processes, thus increasing expenses and losses. *As to households*, natural disasters are catastrophes. After natural disasters, poor people become poorer. Moreover, most of the formally poor households (*who have just escaped from poverty*) are quickly pushed back to poverty (*re-poverty*) just after a storm or a natural disaster event.

Risks and losses following natural disasters are huge, but financial resources to mitigate them are very limited. In the meantime, mechanisms to mobilize, allocate, manage, distribute and use those scarce financial resources have not been improved in Viet Nam as well as other countries.

In Viet Nam, 70% of population are prone to natural disasters and now, especially with climate change. On average, over one million persons need emergency aid following a natural disaster. Nevertheless, resources available for natural disaster prevention and mitigation are limited. In fact, many financial schemes exist but their effectiveness is low, making it difficult for households or local governmental authorities to take ex-ante activities against natural disasters.

Therefore, there is a need for a financial scheme that is highly self-reliant, comprehensive, sustainable and appropriate to insure households. Also, it is needed to finance ex-ante measures to reduce vulnerability to natural disasters².

In Viet Nam, the process of tackling consequences of catastrophes has been incorporated in life of the whole country and reflected in the government policies. Viet Nam considers disaster prevention and mitigation a vital issue when planning socio-economic policies and has tended to mobilize various sources for preventing and mitigating catastrophic losses after disasters.

² The idea to set up a self sufficient fund for natural disaster mitigation in Vietnam was initiated by a research team from the Institute of Financial Science, assisted with international specialists and funded by the UNDP Vietnam via project VIE/01/014 "Capacity Building for Disaster Mitigation in Vietnam". Dr. Bui Duong Nghieu, Senior Researcher, Institute of Financial Science – Academy of Finance – Ministry of Finance, is the team's leader and author of this study.

In the practice, the Vietnamese Government has issued a series of specific policies and measures as follows:

- Issuing the Ordinance specialized in Flood and Storm Prevention (F&SP) regulating articles necessary for natural disaster prevention. A system of standing committees of F&SP from the Center to communities has been set up.
- Financially, besides contingency state budget lines and emergency relief resources, the Government has allowed local F&SP funds to be established by raising compulsory contributions for F&SP activities.
- A national action plan and strategy on preventing and mitigating natural disasters has been issued and covered 12 sorts of natural disasters comprising natural-related, water-related and human-related natural disasters.
- The Government has incorporated natural disaster management in planning development projects in natural disaster-prone areas nationwide.
- The Government has also applied a series of financial, credit, insurance, etc. policies to mitigate consequences after natural perils for quickly recovered livelihoods of households suffering from natural disasters.
- The Government issued a policy of “*co-staying with floods*” by regulating residential areas, transport networks and fruit gardens to mitigate losses after floods.
- Hightening the community’s awareness of natural disaster prevention and mitigation.

Besides various (*infrastructure and non-infrastructure*) natural disaster mitigation measures, Viet Nam has carried out many necessary policies and mobilize various resources to take the initiative in mitigating consequences of natural disasters. Simultaneously, the Vietnamese Government always courts support from international organizations, namely UNDP and WB, as well as other donors for natural disaster prevention and mitigation in Viet Nam.

2. Analysis of Financial Mechanisms and Resources

Recent Institute of Financial Science’s research and surveys have provided a consistent identification about financial resources available for natural disaster prevention in Viet Nam. The resources include:

- State budget including the central budget and local budgets;
- Fund for Flood and Storm Prevention (FFSP) of localities;
- Funds from relief, support of domestic individuals, organizations; charitable aid from individuals, non-governmental organizations, foreign governments and international organizations.
- Credit (formal and informal, preferential and un-preferential schemes).
- Insurance.
- In addition, the contingency liability included in the state budget, ministries and sectors annually have contingent equipment (*lifebuoys, jolly-boats, clothes, blankets, mosquito nets, food, etc*) for disaster prevention.

The survey indicates that most responses (69.2%) state that local raised financial sources meet below 50% of needs, of which the main proportion is spent on natural disaster settlement, followed by natural disaster prevention. The ability to deal with catastrophe from local budget is low. This indicates that other financial sources outside localities (*from the Center, donors, enterprises and households in other localities*) shall be mobilized for natural disaster mitigation. Locally mobilized resources are often seen in the form of human assistance, contributions in kind under community solidarity and mutual assistance to settle short-run problems.

Regarding the stability degree, localities always consider budget resources the most stable and important (*as referred to survey reports*). The ranks are (i) The central budget and the FFSP are considered the most stable while the provincial budget contribute the most; (ii) Contributions from enterprises, oversea aid, emergency relief, voluntary, informal credit are still very low and unstable; (iii) Though contributions from households are all considered stable and at the normal level.

Regarding the importance of each source, the central budget is always ranked the most important (1), followed by local budget lines (2), funds mobilized from residential communities (3), domestic loans (4), support from other localities (5), international loans and relief (6) and donations of charitable organizations (7). This result demonstrates that localities primarily rely on the support from the center for natural disaster prevention but they are not active in looking for local funds and enterprises' contributions. This is a weakness in mobilizing financial funds for natural disaster prevention.

Regarding the credit source, most feedback (43.8%) state that credit plays an extremely important role in mitigating ex-post consequences. Few opinions argue that credit can provide financial capacity for urgent on-the-spot settlement of natural disaster settlement. In other words, when a natural disaster occurs, households do not rely on credit. Regarding the degree of contribution from credit sources, most responses (84.1%) say that credit meets less than 50% of the needs of loans for natural disaster prevention; nearly half (49.2%) say below 20% of needs is met. Credit sources are mainly spent on ex-post natural disaster mitigation, followed by prevention and ex-ante mitigation.

As to the FFSP, most localities have collected fees for the FFSP under Decree 50/CP, but some have not yet (*mainly those in the East of South Viet Nam, Tay Nguyen, the West of South Viet Nam and the Central part*).

Assessment of the timely degree for natural disaster mitigation, the questionnaire-based results indicate that although the allocation of the state budget, the central budget, various local budgets and locally raised funds are sometimes delayed, they are still efficient at an acceptable degree. The most delayed funds are overseas aid. Delay exists in all phases of the process to finance natural disaster prevention. Of all, the phase of appraisal procedures is considered the slowest due to the complexity and involvement of many same-level competent intermediary agencies. Besides, bureaucracy and irresponsibility existing at various levels, local governmental authorities is also a cause delaying the financing of natural disaster prevention.

Regarding the legal framework, at present the Ordinance on F&SP is the highest legal document that directly stipulates the special and financial issues referring to F&SP (the FFSP). Apart from the regulations on the FFSP, other regulations on financing schemes relating to natural disaster prevention are found scattered in various documents on financial, budget, taxation, credit, insurance issues. In addition, policies and levels to finance natural disaster prevention are inconsistent among localities. The center only stipulates the maximum or minimum financing levels as general instructions while provinces issue specific documents. Thus, differences in natural disaster prevention expenditures exist among localities where those expenditures depend a lot on how much can be mobilized for natural disaster prevention. Clearly, this shows the complexity of the regulations on finance, credit, insurance, etc. with reference to natural disaster prevention. This complexity should be simplified and integrated.

Regarding policies and spending degrees for natural disaster prevention. For the state budget's contingency sources, the decentralization mechanism is implemented under the 2002 state budget law. The budget contingency degree at each governmental authority level is decided by the level itself (*within the general regulation frame of the center about the extraction ratio, spending content, etc.*) When natural disasters happen, the governmental authority level can decide how much is spent from its contingency liability (a budget line for annual contingency). If their contingency liabilities are inadequate they can ask the higher budget for extra capital support.

The biggest feature of the current budget, relief and the FFSP is “**non-refundable**” when those resources are spent. That means money paid out never comes back. In contrast, credit and insurance mechanisms show a “**refundable**” when funds are reasonably spent. Insurance mechanisms will also help ensure the sustainability of the SRF in case of claims for losses after catastrophic disasters.

At present, there is no mechanism to promote the self reliance and input-output balance. With the developing market economy, the “self-reliance” will be ensured by the use of insurance, loans or financial investments schemes. If temporarily unspent, moneys are invested, they will make profits and help maintain the capital for the SRF. If fund allocation, support and relief for natural disasters are well-integrated with schemes of financial investments or credit, insurance for the purpose of natural disaster mitigation, the requirements of a “self-reliant” fund will be ensured.

Regarding the organization system, in Viet Nam, many organizations are getting involved in activities of natural disaster prevention. They include People's Committees (PC), People's Councils³ and the government's relevant agencies such as financial and planning departments, agriculture & rural development departments, F&SP organization, Fatherland Fronts, Women Unions, Farmer Unions, Red Cross, Bank of Social Policy, Bank of Agriculture & Rural Development, etc. All organizations actively contribute money but at different degrees for natural disaster mitigation. Of those organizations, the PC always has a decisive role in allocating money for natural disaster prevention.

³ Local authorities in Viet Nam.

Apart from the F&SP organization, all 63 provinces have their own Executive Committees of F&SP that are run by a Vice chairman of equivalent-level PC. Permanent Chiefs of Executive Committees of F&SP are representatives of agriculture and rural development organizations. Other coordinators are representatives from financial organizations, banks, social insurance, etc. Overall, the system of executive committees of F&SP well organized at all intergovernmental has played a decisive role in promoting natural disaster prevention activities. However, as most of the officials are part-time positions who are full-time staffs of and paid by other agencies.

The state budget is mainly spent on restoring and repairing damaged infrastructure (*traffic systems, irrigational systems, schools, medical stations, etc.*). In case of big natural disasters, besides food aid for hunger mitigation within a locality, part of the state budget is spent on supporting plant varieties, domestic animals and households whose family members die and properties are imputed after a natural disaster but the support level is quite small in comparison with the money spent on public infrastructure.

Regarding the processes of allocation, payment and administrative procedures, many outcomes indicate that is random and very complex administrative. Therefore, it is difficult and sometimes slow for households to get access to existing funds for natural disaster prevention and mitigation to timely finance their emergency needs.

Regarding the involvement of households in supervising the process of allocation and usage of budgets for natural disaster prevention, most say households supervise the process above mainly through their representatives. Very few localities allow households to supervise the process directly except for contributions paid by households.

The research on the coordination in supplying funds for natural disaster prevention and mitigation concludes that the coordination between competent State agencies themselves and with unions is generally considered proper and close. However, around 25% replied that the current combination was not good. That loose coordination is a cause of the inefficiency in allocating, managing and spending funds for natural disaster prevention and gaps for some mercenary actions.

In Viet Nam, many financial mechanisms and resources are used for natural disaster prevention. However, their subjects are insufficient, likely to overlap, their resources are scattered and their implementation is inconsistent. The main reason of those weaknesses is due to the existence of many intermediary “clues” in managing and distributing resources for natural disaster prevention. The highly self-reliant unification, long term of natural disaster financing mechanisms are still low and there is a lack of an integrated, capable and financially powerful mechanism for timely natural disaster mitigation for households. Also, due to the existing scattering problem, the current society’s and government’s funds raised for natural disaster prevention and mitigation meet only a small portion of the actual needs and losses. Thus, a study is needed to unify mechanisms and organizations and instantly remove the scatter, overlap and multi-partners in financing affected households after natural disasters. Practical, efficient mechanisms and policies are needed to unify various financial sources (by proper schemes) for natural disaster prevention and mitigation.

Local budgets, FFSP, households' contributions, the central budget's support are the most crucial financial resources presently playing a key role in financing natural disaster prevention and mitigation. Besides the key resources concerned above, other resources are being mobilized from individuals and organizations inside and outside localities for support and relief of inhabitants. Nevertheless, those (irregular and infrequent) resources only arise in case of natural disasters and focus on emergency cases but not the general economic effectiveness of the coordination for sustained natural disaster prevention and mitigation. The practicality of relief, especially relief in kind, is obvious but in many cases problems arise as relief does not meet households' exact needs.

Regarding efficiency, existing financial resources are untimely. The fund's activities tend to be of subsidization, lack self-reliance, rely on mutual help, community solidarity and settle the short-term rather than the long-term. They mainly depend on the state budget, relief efforts, urgent support and credit sources. Though an insurance scheme has been carried out, its efficiency is very low. The presence of various financial mechanisms and sources reflect the active participation of the State, residential communities, non-governmental organizations, enterprises, financial, credit, insurance institutions, individuals, public unions and religious bodies inside and outside natural disaster-affected areas. Nevertheless, the degrees and efficiency of financial contributions, management and usage are different.

The data indicate that (i) the community level lacks on-the-spot financial capacity to settle natural disaster-related matters for households. Although community-level contingent liability of annual budget are regulated by the state budget law, they have not been implemented for community in practice mainly because of a small community budget scale; (ii) Meanwhile, households' financial contingency against natural disaster risks has not been concerned due to their low incomes and poor economic conditions. Therefore, when natural disasters occur, most households are affected and it is difficult to mobilize emergency funds from communities. Hence, a mechanism is needed to overcome that problem. That mechanism, *on the one hand*, shall create conditions for community-level governmental authorities in raising financial resources locally available, decentralized and spent to take the initiative in settling matters following natural disasters. *On the other hand*, that mechanism shall be a shield that households can "rely on" in case of natural catastrophe. At present, as current FFSP are not run by communities and contributions are low; those funds are unable to provide an on-the-spot financial capacity to mitigate natural disasters for households.

Schemes of credit, micro credit, savings-credit in rural areas have had a lot of specific, practical contributions to households' needs but they have not been well incorporated into natural disaster prevention. Overall, *ex-ante* prevention activities based on credit are still immature and lack the combination among current financial and credit tools. Meanwhile, all financial and micro credit tools serve the same purpose of strengthening or increasing incomes for better natural disaster settlement and mitigation for households.

Insurance is also considered one of the efficient financial mechanisms for natural disaster prevention but it is not common in Viet Nam yet. In fact, a lot of issues pertaining to natural disaster and agriculture insurance schemes need to be studied and settled. Though insurance institutions have played an increasing role in sharing risks among communities and directly or indirectly mitigating consequences of natural disasters, a challenge here is how to solve the requirement of "*a profitable business*" to an insurance company. Therefore, an issue coming up is how to study a mechanism that simultaneously satisfies all stakeholders: natural disaster victims, insurance companies, government and residential communities when the insurance mechanism is applied for natural disaster prevention.

International loans and aid also contribute to natural disaster prevention but they are random. Some provinces (Tay Nguyen) do not receive international loans and aid.

Although there are many financial mechanisms for natural disaster prevention, money directly coming to the hands of households, in terms of both scale and value, is still very low unfortunately. At present, mechanisms making cash available to the hands of natural disaster sufferers are mainly credit, relief and emergency aid. Yet, those moneys account for a small proportion of the total value spent on natural disaster prevention as well as financial emergency needs of households. The biggest expenditures on natural disaster prevention are for public infrastructure, equipment purchase and current expenditures on natural disaster prevention such as rehearsing, patrolling, etc. Those expenditures are important and necessary, but not cash directly coming to the hands of households.

Apart from relief, emergency aid sporadically arising to “immediately save” households following natural disasters, households do need support in the form of capital to consolidate their financial capacity for ex-ante natural disaster prevention for sustainable livelihoods, increased incomes, strengthened homes, etc. This can really increase ex-ante and ex-post ability to mitigate consequences following a natural disaster.

The concepts of maintenance and development of funds are unavailable. Also, there are not mechanisms to use unspent resources when natural disasters do not occur. It can be said that natural disaster prevention expenditures are mainly thought to be in the form of subsidies or allocations for free, etc. Concepts related to self reliance and new approaches in modeling and organizing advanced financial measures and mechanisms to actively maintain and develop resources for natural disaster prevention are generally unavailable.

From the international researchⁱⁱ, some key findings are:

- At present, there is no financial scheme or fund worldwide detailing the Government's support for *low income households* for *ex-ante* and *ex-post* risk management activities against natural disasters.
- No financial scheme or fund specifically describes a scheme, albeit some small features like the self sufficient fund for natural disaster prevention and mitigation for households. Furthermore, no schemes have proposed, approached and incorporated activities of preventing and mitigating losses after natural disasters for poor households.
- The current insurance schemes in other countries, only focus on agriculture insurance but not *a scheme purely* serving the prevention and mitigation of impacts of natural disasters on households.
- On-going sponsoring for post-disasters losses could be more efficient and practical if focusing on ex-ante schemes (*aiming at financing the prevention stage through insurance, reinsurance, small-value loans to enhance the financial ability for natural disaster prevention and mitigation*). Ex-post assistance (*donor relief and aid after natural disasters*), despite being traditionally common, are not as effective and practical as ex-ante one.
- Ex-post (*both domestic and international*) assistance, though valuable, is often late and unsecure, thus this help cannot take the financial initiative of localities forward. If a local financial mechanism or fund exists in the hands of localities, they can take the much better initiative in preventing, settling natural disasters as well minimizing consequences following natural disasters.
- Studies of Anne Goes and Jerry R. Skees found out the relations between the natural disaster frequency, their damage degrees and suitable solutions in terms of insurance techniques. Details are:

- Risk of high-frequency natural disasters (*regular events*) with insignificant losses needs the financing from the State, communities and households;
- Risk of medium-frequency natural disasters with medium losses should be insured;
- Risk of low-frequency natural disasters but with huge losses should be reinsured;
- CAT bonds should be applied at a very low-frequency when rare and extremely natural disasters happen.

Risk Sharing in the Stock Market-CAT Bond

There has been increasing interest worldwide in promoting *ex-ante*. Apart from insurance-based approaches, capital market solutions are applied to share risks in the stock market may be feasible and more efficient in providing more complex forms of insurance. One of common types is called *catastrophe bonds-CAT bond*ⁱⁱⁱ-and the like (*This is a technical term but it is very common. This report will use the term CAT bond from onwards*).

Developed countries often use commerce insurance schemes to insure natural disaster losses. Meanwhile, developing ones apply micro credit to strengthen households' financial capacity, income and reduce their vulnerability before catastrophic events. Apart from those schemes, CAT bonds are a new tool considered efficient.

CAT bonds have the following advantages: (i) Sharing risk in a wider scope (at international and national level); (ii) High liquidity, low covariance among risk nationwide or worldwide and no restraints; (iii) Coverage is a region in a given time; (iv) CAT bonds, in case natural disasters do not occur, will be repaid with interest and the principle. In case of natural disaster events, CAT bonds lose part of their interest and principles.

It can be seen that CAT bonds can overcome many shortcomings of the schemes concerned previously. However, in the real situation of Viet Nam, CAT bonds cannot efficiently exercise their potential. This is because the Vietnamese market is immature, the awareness of most households to securities is still low and poor households in high risk areas cannot afford CAT bonds to share risk. Thus, it can be seen that to make CAT bonds a highly feasible vehicle to share risk in the future, in the start up period, there shall be a financial body or "*a financial fund qualified enough to act on behalf of households to invest in CAT bonds*". Otherwise, CAT bonds are a tool of the future.

3. Design Solutions to Establish the SRF

3.1 Defining the Concept of the SRF

The SRF for natural disaster mitigation for households is a financial fund, which is highly communal, not-for-profit but self-reliant, sustainable, maintained and developed financial fund. The SRF is formed by the Government and entitled to raise compulsory and voluntary funds from households, enterprises, political and religious organizations internationally and domestically to mitigate consequences before, during and after natural disasters for households and ensure its self reliance and sustainability.

The concept of the SRF for natural disaster mitigation for households shall be understood correctly and comprehensively as this is a brand new type of fund in Viet Nam and the world. Therefore, the true acknowledgement and comprehension about the concept of the Fund will be very crucial in deciding the establishment of the modality, purposes, contents, operational mechanisms, management and operation of the SRF. Particularly, the agreement on the understanding of “**financial self-reliance**” and “**natural disaster mitigation for the households**” should be integrated.

1) Financial Self Reliance

Financial self-reliance arises from the basis that the financial foundation of the SRF does not depend on the Government’s absolute subsidy. The state budget shall not be obligatory to finance the SRF annually. The SRF respects self-reliant operations, self-ensure its expenditures, self-mobilize, self-manage, self-spend and self-replenish the SRF’s capital. The SRF’s capital mobilization, management and use shall ensure its sustained development in normal conditions. The concept of financial self-reliance includes three contents: **self-reliance, sustainability and capital maintenance and development.**

Self-reliance is shown in processes of mobilizing, managing, allocating and spending the fund’s capital. If the self reliance is weak or unavailable, activities of the fund will be inefficient and cannot be timely and exactly meet *ex-ante* and *ex-post* natural disaster financial needs of households.

Capital Maintenance and Development: means that the SRF’s financial sources (capital) shall be maintained and developed after the fund starts its operation. This shall be guaranteed by (i) mechanisms to mobilize capital (inputs); (ii) mechanisms to manage money (“black box”); and (iii) mechanisms to allocate and spend the fund (outputs).

Sustainability: is shown in all processes of mobilizing, managing, allocating and spending the fund’s capital. After coming into effect, the fund will be able to operate and develop in accordance with the reality and needs for natural disaster prevention within localities. After a certain period the SRF’s financial capacity shall be able to ensure its normal activities. Then, the issues of a “bailout”, “financing” and “extra expenditures” from the state budget or donors will not be mandatory. The factors ensuring the fund’s “sustainability” include:

- The mechanisms of mobilizing capital shall be based on a strong legal basis and a rational economic basis. Contribution levels shall be suitable for economic conditions of contributors whilst various contributors should be used for the fund.

- Management of the fund shall obey mechanisms, techniques, advanced financial management and legal regulations; information from the fund shall be disclosed and audited.
- Expenditures shall be within given regulated limits and disclosed in terms of both expenditure items and compensation (*or subsidy*) levels stipulated to ensure right expenditures, timeliness and needs of households.
- Unspent capital shall be invested but it shall follow safety principles for financial investments.
- There shall always be support from the Government's policies. The Government and/or donors shall guarantee the SRF in case of catastrophic events out of the fund's financial capacity, especially in the start up period of the fund.

2) Natural Disaster Mitigation for Households

Natural disaster mitigation for households is the main principle, purpose and function of the SRF. There are two categories of natural disaster mitigation: emergency and long term.

Emergency are activities bearing the meaning of relief to help households recover after natural disaster. Long term can be interpreted as "prevention" measures, of which the best ways are to improve financial capacity (*increased income*) for households.

Emergency measures are normally "*charitable*" activities. Financially, capital of the fund (*when spent on emergency relief purposes*) will be non-refundable in a direct way. Activities such as subsidiary and charitable activities are not-for-profit purposes. However, measures in the long time are closer to the "market rules" meaning that capital spent can be refunded or profitable. Those market-related measures will be able to ensure the fund's maintenance and development.

3) Key Characteristics of the SRF

During its operation, the fund applies techniques of market economy rules to maintain and develop resources raised. This is presented by measures the fund will employ (*insurance, credit, finance, allocation and investments in financial markets*). Those are technical factors, which can ensure the fund's self reliance as well as maintain and develop the fund's capital and assets.

The SRF is self-reliant in terms of the right to make decisions on mobilizing and spending the fund. The Center (*or the higher governmental authority*) only issue legal framework, regulation and guideline documents but the documents shall be issued in advanced and public. Specific management is decentralized to each governmental authority level to promote responsibility, resilience and creativeness of governmental authority levels as well as various levels of fund management.

The feature of "financial self reliance" makes the SRF quite different from existing financial funds (*contingency, support, relief or quick response funds*) for natural disaster mitigation in terms of all processes from mobilization, spending, operation as well as depletion/non-depletion features of the SRF's capital.

The feature of "natural disaster mitigation for households" makes the SRF bear features of a communal fund mobilizing contributions from many organizations and individuals for communal purposes.

4) Operational Guidelines

Operational guidelines of the SRF are:

- Strong decentralization, quick relief, self reliance, on-the-spot settlement and financial rule compliance.
- The majority supporting the minority, a good year covering a bad year, various resource mobilization internationally and domestically for natural disaster prevention and mitigation, safely and efficiently spending the fund's capital resources to meet households' needs in the best way in case of natural disasters.
- An integrated, disclosed, transparent, efficient, audited fund to raise the effectiveness of mitigating consequences of natural disasters.

The SRF is **not** a charity fund, which provides subsidies for free. The fund's operation does not base on full subsidy. The fund does not aim to force households to become passive participants or pure beneficiaries of the fund.

The SRF is **not** a financial institution purely working for profit, either. The SRF only applies financial techniques in market economy, respects market rules, exploits advantages of the market to maintain and develop the fund's capital so that the fund is (*financially*) capable of self-coping with problems for natural disaster-prone households after natural disasters.

The SRF will try its best to help local governmental authorities and households in areas vulnerable to natural disasters in taking *ex-ante* and *ex-post* natural disaster measures to more efficiently, more sustainability, more practically prevent and mitigate consequences following natural disasters for more quickly recovered livelihoods and more sustainable development.

3.2 Operational Goals

The goals of the SRF are:

- To be an integrated body to mobilize a variety of domestic and foreign financial (*compulsory and voluntary*) resources to finance *ex-ante* and *ex-post* reduction of vulnerability to natural hazards for households.
- Assisting households in natural disaster-prone areas for their sustainable livelihoods before, during and after natural disasters; providing modest but timely and crucial support in cash to affected households after natural disaster in order to allow them to re-establish their livelihoods.
- Increasing household's capacity to respond in a resilient fashion; reducing vulnerability of households, especially the poor and reinforcing livelihoods after natural disaster events.
- To use the unspent capital source effectively, ensuring proposed purposes and respect the regulations of the legislation.
- Right after its start up, the fund should mobilize enough capital for its operations. In the first years (not over five years), the key donors (*the state budget; the WB; the UNDP; international and local non-governmental organizations and other governments*) shall provide enough capital as committed.
- In the operation process, the fund should continue to call for current capital available for ensuring natural disaster mitigation for households in natural disaster-suffered prone areas (*as stipulated by the law and regulations*).

- The capital of the fund shall be maintained and developed. The fund's information and reports shall always be disclosed, transparent and audited. At the end of each fiscal year, the assets and capital of the fund shall grow greater than their beginning value. Financial tools/schemes should be applied step by step in accordance with the market mechanism, including financial allocation; community/precinct-level micro credit; insurance; reinsurance and mutual insurance; financial investments (*in bond market to maintain and develop capital*).

3.3 Beneficiaries and Scope

Beneficiaries of the Fund are inhabitants including households, individuals in communities regardless of their economic sectors. The SRF does not cover organizational beneficiaries such as institutions, groups, schools or hospitals, business entities, etc.

The SRF's operation scope includes two main sectors: (i) Rehabilitation of livelihoods and (ii) Rehabilitation of production and business activities for households. The fund will assist households by financially supporting their sustainable livelihoods, production and increasing their income before, during and after natural disasters.

However, the fund does not provide assistance for public constructions (*such as schools and hospitals*), or public infrastructure (*such as dykes and roads*) that are not of the fund's operation scope.

3.4 List of Losses Compensated by the SRF

It is important to distinguish the terms of “**subsidy**” and “**compensation**”. The scope of “subsidy” is narrower than “compensation”. “Subsidy” means that a certain money amount, normally lower than actual losses, is provided to households for mitigating their losses after natural disasters. “Compensation” is understood as a money amount equivalent to or higher than an actual loss is compensated for that actual loss depending on economic/insurance contract terms previously signed. In the meanwhile, “subsidy” does not originate from and depend on economic contracts but often bears the sense of being “compulsory” and “fixed” as stipulated (*by a given legal document*).

To avoid a narrow coverage as seen from the case of the FFSP, the SRF will be established with a wider scope but it cannot cover all sorts of natural disasters. If the SRF manages to cover all types of natural disasters in the short run, it is not feasible. Main types of natural disasters in Viet Nam within the subsidy scope of the SRF comprise storm, cyclone, flashflood (including mud and sand flow), flood and coastal area after storms, inundation, drought, desertification, bush fire, reservoir problems, landslide, salt intrusion and industrial problems. In the short run, the SRF should focus on most common natural disasters within the fund's financial ability, say, storms; various types of storms, floods, inundation; coastal surging; whirlwinds, cyclones, hails; landslide drought and perhaps earthquakes.

Not all levels of losses after natural disasters are subsidized by the SRF but only certain loss levels are subsidized by the fund. In setting up the fund, a specific list of losses entitled to subsidy should be formed as the threshold for partly compensated losses after a natural disaster. That list shall be detailed and clear and has quantitative criteria in accordance with the situation of localities. Annually that list shall be updated and propagated to inhabitants nationwide.

Risks and losses ensured by the SRF are risks and losses which are caused or likely to be caused by one and/or many types of natural disasters addressed in the disasters list for households' livelihoods. **Risks** are defined as potential losses, which are likely to occur but have not occurred and require preventative measures to mitigate their consequences before their occurrence. **Losses** are risks that have occurred and caused losses to households' livelihoods and they need to be financially supported to mitigate their consequences for households.

Losses of assets include (i) Property losses: homes, stores, tents, cattle sheds, farms of households; (ii) Production material losses of households and (iii) Losses of crops and livestock after natural disasters in the stipulated natural disasters list.

Losses of human lives include: deaths and injuries leading to working ability loss after natural disasters that are concerned in the stipulated natural disasters list.

3.5 Autonomy Principles

The autonomy principles of the Self Reliance Fund consist on five autonomies following and shall be within the current legal framework of Viet Nam.

1. Financial Autonomy

The principle of financial autonomy requires the SRF to operate based on: self-balancing incomes and expenditures, being self-responsible for maintaining and developing its capital, including financial investments, within the current legal framework. The SRF is an independent entity under the management of various executive committees of F&SP from the Centre level to province-, district-and community-levels. Executive committees of F&SP shall have real rights to the SRF for natural disaster mitigation at their levels. Chiefs of various executive committees of F&SP will be account holders at corresponding levels.

The SRF is financially autonomous in all processes from mobilizing, managing, allocating and using the money mobilized within the legal framework and in accordance with its operational purposes. The SRF is responsible for developing, registering financial plans and submitting financial reports to competent governmental authorities as regulated by the legislation. Financial plans and reports shall be published on the Internet and/or the SRF's website.

The SRF shall strictly obey laws on accounting, statistics, auditing, transparency and financial reports currently applied to financial institutions. The SRF implements the monitoring and controlling of financial operations within the fund's internal system. The fund is also under the checking and supervising of the Government's competent organizations as per regulated by laws.

2. Autonomy for Investments

The autonomy for investments is expressed by the rights to decide and take the responsibility for making decisions in investing temporarily unspent capital within the legal framework and safe investment ratio restrictions.

Theoretically, investments of the SRF can be financial and property investments. However, in the short run, they should be limited in financial investments, of which only Government bonds trading and/or some other highly liquid and low risk investments should be made. The Fund should not invest in real estate market and stock market.

Investments of temporarily unspent capital help reinforce the SRF's sustainability and directly maintain and develop its capital. Investment activities must follow rules of market economy, obey the current legislation and be stipulated in details (*for investment portfolios, safety restrictions on investments, etc.*) in the fund's establishment decision to safeguard its investments.

3. Autonomy for Professional Operations

The SRF is autonomous in running its professional operations. This feature is extremely important for helping the fund maintain and develop its capitals and meet all financial requirements of households suffering losses following natural disasters. Obviously, the fund's right to be autonomous in terms of its specialized operations must abide by Viet Nam Government's regulations relating to its operation as well as regulations on micro-finance, insurance, reinsurance, mutual insurance, credit, financial and security investments, etc.

4. Autonomy for Managing Assets

The contents of asset management include: (i) Having the right to make decisions on purchasing, using, depreciating, liquidating assets serving the fund's operations; (ii) Being autonomous in managing, using its capital and assets assigned by the Government to take valid activities and make legal profits from such capitals and assets within lawful regulations and (iii) The SRF has the right to transfer assets and capital that it has received from the Government to its sub-units; and/or retransfer the capital and assets assigned in necessary cases in accordance with the system's overall development plan.

5. Autonomy for Structure and Personnel Management

After having the establishment Decision issued by the Government (*a Decree or a Decision of the Prime Minister*), the SRF shall have the right to self-decide issues relating to its organization, staff recruitment and dismissal as decentralized and in accordance with current legal documents. For example, the province level will make decisions on (i) Establishing, dissolving and merging units within the province level; (ii) Promoting, demoting and dismissing management staff and (iii) Recruiting, arranging, paying salary, rewarding, disciplining and dismissing staffs under its management.

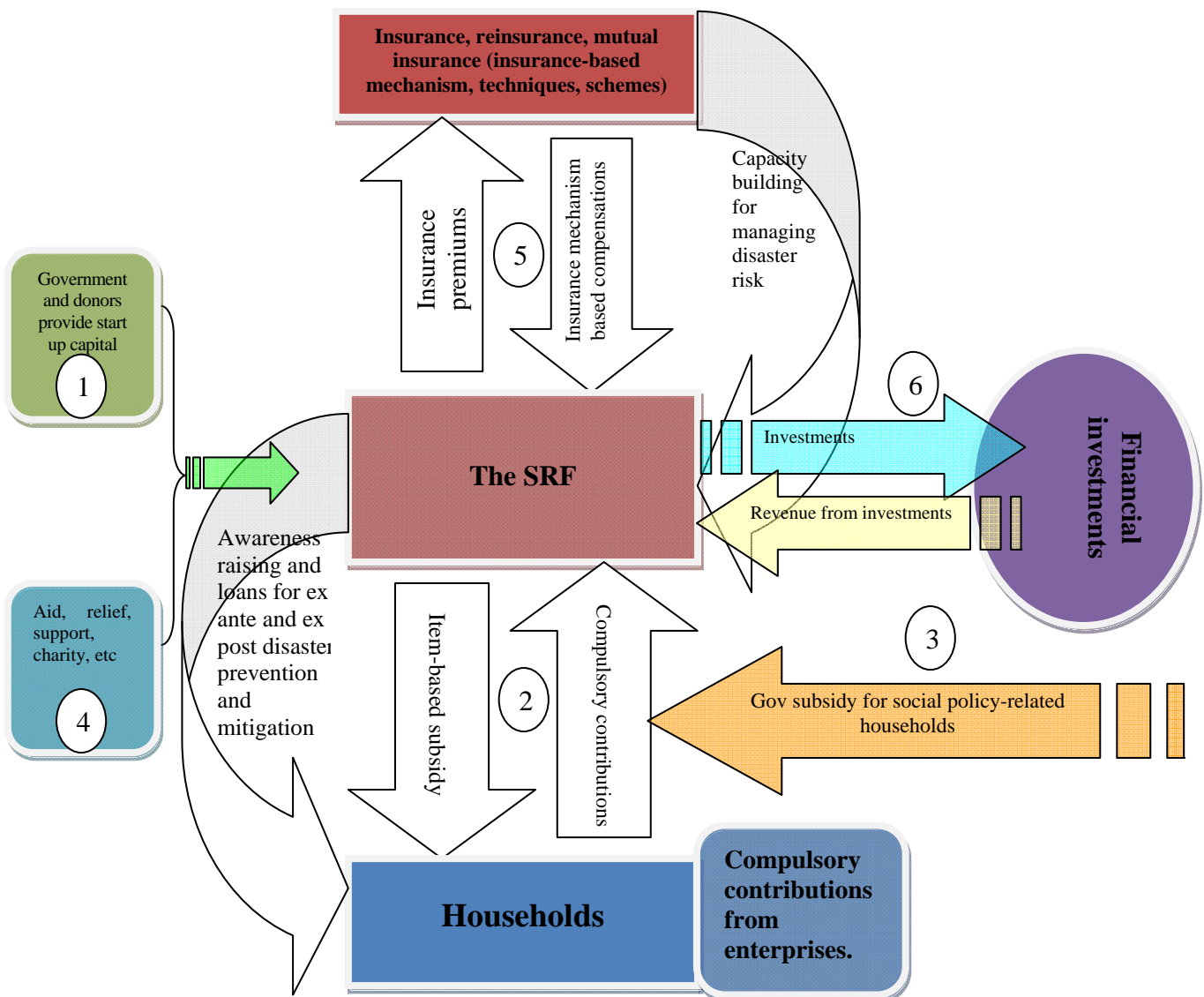
3.6 Operational Modality and Instrument Options

1) Specialized Operations

Specialized operations of the SRF shall be rational, simple and decentralized to promote the process of support, payments and subsidies for disaster-affected households. After its introduction, the SRF will help to change traditional natural disaster mitigation schemes currently being cumbersome, bureaucratic and *ex-post* focused in Viet Nam.

In the flow chart followed which shows a schematic view of the SRF's operations, the fund's key operations include:

- (1) Direct relations between the Government and main donors in supplying its start up capital which is once-provided when initiating the SRF. Extra capital can be provided in case of catastrophe losses exceeding the financial ability of the SRF (*The Government and donors do not supply capital for the fund yearly*).
- (2) Direct relations with households in collecting their mandatory contributions and subsidizing their damages according to the stipulated items. The SRF will also organize training courses on disaster prevention for households. At the same time, the fund also makes loans based on micro-credit mechanism for strengthening houses, developing businesses, raising income and restoration in terms of *ex-ante* natural disaster prevention.
- (3) Relations with various state budget lines in receiving Government's allowances to pay part contributions for social-policy related households as per regulated by existing regimes and mechanisms.
- (4) Direct relationship with domestic and overseas non-governmental organizations in receiving relief, support, donations, etc. from those organizations.
- (5) Direct relations with enterprises in collecting their compulsory contributions according to the legal regulations.
- (6) Direct relations with insurance, reinsurance and mutual insurance companies in purchasing their insurance, reinsurance schemes, or co-issue mutual insurance schemes to insure the SRF against catastrophes.
- (7) Relations with financial markets in investing temporary unspent capital (*in loans, savings, bonds, etc.*) as regulated by laws, if allowed, within the safety restrictions.



Schematic view of the SRF

2) Instruments

Key financial and credit instruments for actively mobilizing, preserving and developing the SRF's capital include (i) Financial subsidies (*to support losses after natural disaster*); (ii) Micro-credit (*at the community level*); (iii) Insurance, reinsurance, mutual insurance to share risk and to compensate natural disaster losses and (iv) Financial investments (*from temporarily unspent capital*). Details are presented in the section of key operational mechanisms of the SRF.

3.7 Key Operational Mechanisms

A) Input Mobilization

(1) *Start Up Capital Based on a 50/50 Mechanism*

The SRF is a financial fund which is not-for-profit, humanistic, communal, effective and practical for sustainable development, hunger eradication and poverty reduction. As its goal, it is in tune with the interest of the Viet Nam's Government and donors (such as UNDP, World Bank, Governments and international non-governmental organizations). Therefore, the SRF will be supported by the Government and donors.

The once-provided start up capital based on a 50/50 split is the optimum choice. The VN Government (Viet Nam's state budget) contributes 50% of the estimated initial capital while international donors support the rest through non-refundable aid scheme for the starting up capital.

Based on that provided initial capital, the SRF self-manages and self-organizes its activities as stipulated. How much start up capital is provided, it depends on the agreement between Viet Nam and donors based on the principal that if the Government of Viet Nam provides one USD, donors also provide one USD to initiate the SRF.

According to estimates, the total of the start up capital (*once-provided*) for the whole SRF system in Viet Nam (*including the Center-level SRF, 64 province-level SRFs, 650 district-level SRFs and over 11,500 community-level SRFs*) is from 0.2% to 1% of the total annual state budget, estimated from 100 million to 200 million USD, of which:

- Regarding the capital provision levels, the state budget of Viet Nam (including the central and local budgets) and international donors provide 50% each.
- Regarding the time, the start up capital can be once-committed and once-provided or gradually provided from three to five years in accordance with financial ability and setting up speeds within localities.
- Specifically, the 50% provided by the state budget will come from the contingent liability of annual budget, when the SRF is established, of the central budget and provincial-level budgets based on the following principals:
 - o The central budget provides the start up capital for the Central SRF and SRFs only in provinces where input-output imbalance exists;
 - o Provinces that can balance their budgets (revenue equal or over to expenditure) are responsible for the start up capital of their SRF.
 - o All the above articles will be clearly stated in terms of mechanisms and capital value in the Decision of the Government for the implementation within localities.

Looking for such a start up capital as proposed above is not too difficult as the total need of the start up capital is within the estimated contingency budget. Though the above proposed data are fairly high for a start up capital for a SRF they do not exceed the capacity of the state budget and international donors. Therefore, the proposal is feasible. Obviously, detailed calculations will be provided later after the mutual agreement is reached among all providers. There are only initial projections. Details are referred to other reports and documents on start up capital proposals.

Given feasible estimates, if each province receives a start up capital of from VND10 billion (*the lowest level*) to VND50 billion (*the highest level*), a community-level SRF unit receives

from 2,684 USD to USD13,500 USD. This matches financial needs for relief and loans of micro projects in rural areas for sustained lifelines, increased incomes, improved rehabilitation and reduced vulnerability for households.

It is important for a community to have really a SRF which the start up capital is very reasonable (*from 2,684 USD to USD13,500 USD*). With this fund, the local authorities can take the initiative activities and financially ensuring the “**four on-the-spot**”⁴ policy in managing natural disaster mitigation. This resilient fashion can solve lots of natural disaster and financial problems due to inefficiency and delay of current mechanisms. This capital source will also help to replace *ex post* risk management activities with *ex ante* ones.

(2) Regularly Mobilized Financial Sources During the Operation

After the start up period, the state budget will not sponsor the SRF if more duties are not assigned. Otherwise, more financial support from the Government must be provided for more duties of natural disaster relief, support, mitigation, etc.

The state budget annually arranges 3%-5% of total annual budget expenditures as budget for a contingent liability for unexpected events. Most of the contingent liability is spent on natural disaster losses. Therefore, a small percentage of the contingent liability (*0.2 to 1%*) is proposed to be extracted for financing the natural disaster mitigation for households. In addition, the SRF's sources will be from:

- Annual direct obligatory contributions from enterprises and households.
- Non-refundable aid and/or money transferred for rescue and relief.
- Incomes from financial investments.
- Compensations from insurance, reinsurance, mutual insurance organizations in which the SRF is a member.
- Other disaster-related collections.

(3) Contribution Mechanism from Households

The SRF's design is an upgrade to the current FFSP. By law, compulsory contribution mechanisms from households (*and enterprises*) should be continued as stipulated in the 1993 Ordinance on F&SP and the Decree No. 50 dated 10 May 1997^{iv}.

The contribution levels to the SRF shall be heightened. The reasons are:

- The current contribution levels (for the FFSP) are too low. This has created negative reactions because the households would rather pay more and get reimbursed. Currently, their minor contributions cover some prevention activities. Households pay compulsory contributions to the FFSP. However, the FFSP spends on rescue equipment, civil emergency drills, etc. It does not directly compensate part of losses for households. This discourages the collection implementation for the FFSP.
- For the new plan, each Vietnamese citizen (*males from 18 to 60 years old and females from 18 to 55 years old*) will contribute one of two ways:
 - o For the employed: one day's salary (e.g. a CEO might pay 100 USD while a bus driver would pay eight USD);
 - o For street merchants and such: two USD per person per year.

⁴ “Four on the spot” means all Leaders, personnel, items for rescue and finances should be really on the area for against natural disasters.

- For others (farm workers/unemployed) one USD per person per year.
- Furthermore, the purpose, coverage and benefits of the SRF are much more humane, wider and more economic than the FFSP.
- Meanwhile, with the SRF, a new compulsory contribution level shall be higher but post-disaster damage suffered by households are partly covered.

(4) Contribution Mechanism from Enterprises

Enterprises must be responsible for contributing (*and supporting*) to natural disaster and/or climate change prevention. Although enterprises are not entitled to direct benefits of the SRF, they directly or indirectly benefit from outcomes of natural disaster prevention activities in areas where they are headquartered. If losses borne by households after natural disasters are not soon recovered, or households' *ex ante* natural disaster prevention is weak, enterprises' business activities surely decline due to passive impacts (*such as reduced purchasing power of households leading to declined good consumption and declined labor sources, etc.*).

Actually, enterprises of various economic sectors annually pay 0.02% of their total production and business capital but not over VND five million per year. Those contributions are considered costs of goods sold or circulation costs. This indicates that the continued and improved obligatory contribution mechanism does not shock enterprises and encourage enterprises' responsibility for the community.

Therefore, some proposals are:

- Maintaining annual mandatory contributions paid by enterprises for disaster prevention.
- Updating the bases for compulsory contribution calculation, for example, based on registered business capital (*when an enterprise was set up*) for easier collection, contribution and management
- The annual mandatory contribution level is proposed to increase from 0.02% to 0.05% and any compulsory is tax deductible.

According to this proposal, if a charter capital of a very small enterprise is VND500million, then its contribution is VND250,000 per year (about 14 USD). If the charter capital is VND3 billion, its annual contribution is VND1,500,000 (about 84 USD). This is very logical and feasible. In addition, when natural disasters happen, enterprises all carry out activities to finance losses following disasters.

(5) Mobilization Mechanisms from other Sources

- 1) Apart from the initial capital (once-provided) and mandatory contributions from households and enterprises, other financial sources of the SRF include:
 - Sporadic receipts or contingency allocations from the state budget to carry out extra duties.
 - Allowances (part of or whole) from the state budget to subsidize compulsory contributions for social policy (beneficiaries are poor, semi-poor, invalids, families of revolutionary martyrs, etc).
 - Receipts from aid, relief and support from domestic and overseas non-governmental organizations and individuals;
 - Incomes from financial investments, loan entitlements, loan interest and loan principal repayments received are generally called *incomes from financial investments*.

- Compensations based on the insurance mechanism from insurance and reinsurance contracts. They are generally called *receipts from insurance activities*.
- Incomes from fixed asset sales, lease or fixed assets disposal, etc. are put into an account called *incomes from other activities*.

Those receipts arise according to actual needs in reality. Thus, it is unable (and unnecessary) to estimate or calculate those receipts.

B) Management, Mobilization and Use of the SRF

The SRF's financial expenditures are mainly divided into the following groups:

- Expenditures to subsidize, support losses after natural disasters for households based on a regulated List.
- Expenditures as small loans to strengthen households' financial capacity of ex-ante disaster mitigation and reduce their vulnerability.
- Expenditures to perform tasks transferred from the FFSP.
- Expenditures to make investment activities to maintain the SRF's capital, for example, financial investments, etc.
- Expenditures to share risks by purchasing insurance, mutual insurance and reinsurance schemes.
- Expenditures to pay management costs such as wages, equipment purchase, etc. to manage and operate the SRF.

(1) Financial Subsidy to Mitigate Losses after Natural Disasters

Subsidy and support are mainly in the form of emergency subsidy, relief and support in case catastrophic events occur. Those expenditures deplete the SRF as they can not be recovered. Therefore, there shall be measures to replenish the SRF.

Cases of the SRF's subsidy are losses suffered by households but the subsidy value is not equal to 100% of losses but normally lower, fixed and set in advance.

Based on current regulations on the expenditures spent on flood, storm and natural disaster prevention, how much the SRF is spent, who are entitled, how to finance losses and what types of disasters are covered will be adjusted as the formal bases for subsidies.

Sources to finance emergency aid, relief and support come from: (i) annual estimated expenditures of the state budget (*center and localities*) on natural disaster prevention and (ii) aid, relief and donation sources from domestic and overseas organizations and individuals^v;

(2) Small Loans for Natural Disaster Prevention within Localities (Microcredit)

Paying out emergency assistance for livelihood restoration is only part of the purpose of the SRF. The SRF would accumulate an asset portfolio to be dedicated to social investment. Most of this would consist of loans made for disaster mitigation purposes and for reducing the vulnerability of poor households.

Micro credit schemes, operated on current principles and schemes of micro credit, are implemented at the community level and in line with habits, customs and small needs of households within the legal framework. Especially, there shall be a close coordination with local credit, banking and public bodies (*the Social Policy Bank, the Bank for Agriculture and Rural Development, Women Unions*). The best way is to authorize those organizations to incorporate micro-credit in natural disaster prevention tasks within localities.

Micro-finance with a scheme to rotate loans incorporated in disaster prevention is a useful financial scheme suitable for *ex ante* natural disaster prevention in the context of Viet Nam. This is because the scheme can meet what households expect, thus are welcomed by households and local governmental authorities. This scheme also helps the SRF to maintain and develop its capital and directly finances households to reinforce their livelihoods and incomes as *ex ante* measures against disaster risks.

Small loans (*micro-credit*) incorporated in disaster prevention within communities bring many benefits for households in terms of timely and quickly met financial needs. Households receive what loans they require, normally lower than their actual needs and they can manage and pay back those loans later. This micro-credit scheme is highly sustainable as basing on a lot of factors (*for example, consideration and appraisal before loans are made, loans can be paid back, households can support one another, etc.*). Those advantages can create a sustained micro-finance scheme to mobilize and spend a given source in mitigating catastrophic losses for affected households.

In a micro-finance scheme, how the SRF system becomes a successful vehicle for disaster mitigation strongly depends on how well communities, especially communities, can participate in it. Their participation is essential right from the first consideration of what loans can be made, who are eligible to emergency relief, as well as their involvement in managing the SRF in the next processes. Households must actively take part in supervising how the SRF is managed and spent. If their involvement does not or passively exists, the SRF will be dying prematurely. To avoid this, the following things should be done:

- As to the financing scheme, households have to contribute to the SRF so that their interests are tied to their responsibility for the SRF.
- As to mechanisms, detailed stipulations are needed so that households can take part instantly from phases of planning, making procedures, checking, etc. to phases of allocating and using.
- As to technic, using the PRA method.
- The presence of competent bodies where households can propose their needs is essential. Households must have the right to express and contribute their needs. And their needs must be financed (met) by specific actions and results. At the same time, there must be representative organizations such as Women Unions, Farmer Unions, etc.
- Therefore, the training and information flow for the SRF's staff and households are very important.

(3) Insurance, Mutual Insurance and Reinsurance to Share Risk

It is necessary to emphasize the role of the use of disaster and agriculture insurance; reinsurance and mutual insurance tools by working with insurance bodies such as BaoViet, Groupama, especially, a project sponsored by the ADB for the Ministry of Finance (2005-2007) to purchase agriculture and/or disaster insurance schemes and with VinaRe, SwissRe and MunicsRe to reinsure disaster risks in the East Asia region.

The SRF, on behalf of households, will purchase insurance schemes or take part in co-establishing a mutual insurance fund. The benefits, if the SRF purchases insurance or co-found a mutual insurance fund, are:

- The calculation of expenses and compensations will be simpler than that of direct compensations to households. As calculation techniques, based on disaster indices, can be applied, it is possible to make disaster insurance a meaningful vehicle for disaster mitigation.
- When the purchasing disaster insurance scheme is transferred to the SRF, the Government's subsidies for the insurance premiums for households becomes feasible. The reason is:
 - o The Government can avoid not to directly subsidize the number of households, which is too large and various.
 - o If the Government through insurance companies subsidizes part of the insurance premiums for households, that is a violation to WTO's regulations.
 - o Therefore, it is feasible if the SRF, on behalf of households, purchases insurance and the Government, through the SRF, subsidizes part of insurance premiums for households.
- When coordinating with insurance bodies in purchasing insurance schemes, reinsuring disasters or co-establishing mutual insurance, the SRF can better perform its disaster mitigation duties while being able to keep itself financially sustainable.
- With the involvement of the SRF in co-founding mutual insurance, the capital source to start up capital mutual insurance will be bigger and more stable, making the coordination between the SRF and mutual insurance in mitigating disaster losses more efficient.
- The SRF's involvement in insurance, reinsurance, mutual insurance on behalf of households can ensure all benefits and roles of stakeholders (*communities, government, insurance companies, the SRF*). This makes the SRF a more feasible vehicle in insuring disaster risks for households.

From the international experience, it is important to note that the SRF is technically feasible when insurance and reinsurance tools are rationally used. Reinsurance is expensive and paying for it will account for a significant proportion of the excess of contributions over benefits paid out in a "normal" year. A basic fact of life in starting an insurance scheme is that one must reinsure very conservatively early in the life of the scheme. With time, a substantial reserve SRF can be built up from accumulated surpluses and returns on investment; experience and familiarity with the loss distribution will be accumulated and, perhaps most important, a significant amount of *ex ante* natural disaster mitigation investment will have been undertaken. It is needed to coordinate insurance and reinsurance with BaoViet, VinaRe, SwissRe, Groupama, mutual insurance when the SRF operates.

(4) Unspent Capital Investments

The capital of the SRF, which is temporarily unspent, can earn extra incomes for the SRF if invested in Government bonds, Government-secured debentures; deposits at banks and trusty credit organizations. It is important to note that financial investments of the SRF must be considered and selected so that they are always safe, effective and available for solvency in case of catastrophe events.

Investing unspent capital of the SRF, however, must comply with restrictions on what investment portfolios and maximum amounts can be invested and abide by banking, financial and insurance regulations of the State Bank, the Ministry of Finance and other international principles on financial investment safety. The principles on investing unspent capital are *safety*, *effectiveness* and *regular solvency*:

- The “**safety**” principle requires unspent capital to be safely invested so that compensation is always made available for cases of disasters perils. This is a leading principle so-called “safety-first” for unspent capital-based investments of the SRF.
- The “**effectiveness**” principle implies that the SRF’s investment activities must be profitable as profits from investments will allow the SRF to replenish considerable expenditures to reduce households’ contributions.
- The “**regular solvency**” principle requires that the SRF must be able to pay households suffering from losses at any time. Therefore, the SRF must invest in assets that are easy to be converted into cash. In the other words, such assets must be of high liquidity.

Apart from above investment principles, another principle the SRF must comply with is that the SRF is only allowed to invest in portfolios as stipulated by the Government. This means that its unspent capital will only be invested with given restricted ratios^{vi}. Nevertheless, the resilient market principles to wisely invest unspent capital within a lawful framework, as some of the crucial things, can make the self reliance, capital maintenance and development of the SRF viable.

C) Balancing and Using Sources

1. Inputs of the SRF Include:

- Receipts from state budget and international donors
- Mandatory contributions from enterprises and individuals.
- Receipts from relief, aid and support of domestic and overseas organizations and individuals.
- Incomes from insurance, reinsurance and mutual activities.
- Incomes from financial investment activities.

2. Expenditures of the SRF

Expenditures of the SRF can be divided by two categories: Refundable and Non-refundable ones.

Non-Refundable Expenditures comprise: (i) Expenditures for emergency assistance and relief in case of natural disasters; (ii) Expenditures for preventing, coping with and mitigating consequences following natural disasters; (iii) Administrative expenses for the SRF's management (*including salaries, operational expenses and others*)

Refundable Expenditures include: (i) Financial investments; (ii) Expenses for insurance, reinsurance and mutual insurance activities to share disaster risks and to ensure financial sustainability when the SRF is spent to recover part of losses suffered by households.

The SRF expenditures are also divided into current expenditures, capital expenditures, financial investments expenditures and other expenditures. Current expenditures consist of non-refundable expenses and the SRF's administrative management expenses. Capital investments (refundable) are spent on purchasing fixed assets of the SRF, including:

- Expenses of investment activities as per lawful regulations;
- Bank charges, interest paid for loans;
- Provisions for security investments diminutions;
- Other expenses as per regulations of laws.

3. Balancing the SRF's Sources

Balancing inputs and outputs of the SRF is regular. Financial balancing can provide an overall financial picture and safety degree at a required point of time. Thus, technics to present and analyze the input-output balance sheet (financial statements) of the SRF is very crucial.

It is important to note that balancing inputs-outputs requires a clear and accurate identification of which ones are inputs/outputs and if they are non-refundable sources or not so that their accounting nature is exactly determined. Then, the financial situation of an individual SRF and the whole SRF system can be stated at any required time. Together with safety principles, the financial statements must indicate alert signals of the financial status of the SRF (if safe or not) and propose corresponding solutions in bad cases.

Administration level-based input and output balancing will help higher administrators to have an overall view about the financial situation of their subordinates. Then the higher administrator can moderate financial sources from temporarily low demand areas (*where natural disasters rarely occur*) to temporarily high ones (*where natural disasters often and severely occur*). This indicates both the feasibility of the proposed SRF and its advantages in running natural disaster prevention activities.

Table 1: Input and Output Balance of the SRF

Output	Value	Input	Value
1. Compensations based on listed items		1. Start up capital provided by the state budget and donors	
2. Expenditures on F&SP activities		2. Capital provided by the state budget for extra duties assigned by the State	
3. Expenditures on the SRF's activities consisting salaries, administrative management, etc.		3. Other off-budget items from the state budget	
4. Expenditures on training, advertising		4. Contributions from households	
5. Purchased fixed assets and equipment		5. Contributions from enterprises	
6. Small loans (Micro credit in communities)		6. Aid, relief, support for disasters	
7. Other expenses related to insurance, reinsurance, mutual insurance		7. Compensations paid by insurance, reinsurance, mutual insurance organizations that the SRF is a member	
8. Financial investments		8. Incomes from financial investments	
		9. Provisions	
9. Others		10. Other incomes related to natural disasters	
Total		Total	
Surplus		Deficit	
Balance		Balance	

Alert. If catastrophic events or many natural disasters frequently happen in the early years of the SRF, when its accumulated capital is low, the SRF will be imbalanced (*outputs exceed inputs*). At that time, the state budget shall sponsor more capital to save the SRF (based on proposals of the center level of SRF).

Table 2 – Input Balance of the SRF

Code	Particulars	Input		Output		Balance		
		VND	%	VND	%	Surplus	Deficit	%
1.	Non-refundable financial sources							
1.1	Expenditures from state budget for disaster prevention							
1.2	Overseas and domestic aid, relief, support for disasters							
1.3	Receipts of mandatory contributions							
1.4	Receipts from insurance							
...							
1.9	Other Non-refundable financial sources							
2.	Refundable financial sources							
2.1	Initial and additional capital allocated by state budget and donors							
2.3	Sources from financial investments							
2.9	Other refundable capital resources							
3.	Total of non refundable and refundable capital resources							
4.	(Proposed) solutions							
4.1	Additional capital from state budget and donors							
4.2	Additional capital from the state budget							
4.3	Loans from ODA							
4.4	Non-refundable aid							
...	...							
4.9	Other solutions							

D) Maintenance and Development of the Capital

The question of, by both policies and technical measures, how to maintain and develop the SRF's capital to make its sustainability viable, shall be implemented at all processes of right from mobilization to management, allocation and use of the SRF, basing on features of each process and operation.

How capital can be well maintained and developed at the mobilization process are indicated by:

- Effective and sound measures to mobilize contributions of households and enterprises within localities.
- Convincing measures to receive part of the contingent liability of annual budget of the state budget (*at both center-and locality-levels*) for natural disaster prevention. Incorporating non-refundable expenditures into financial sources annually allocated to various state budget lines.
- Effective campaigns to call for aid, relief and support from overseas donors; international and local non-governmental organizations, enterprises and individuals.

How capital can be well maintained and developed at the at the usage process are presented by:

- Issuing a list of compensated items. That list should be always updated and disclosed as a basis for compensating and subsidizing losses for households. Compensation procedures should also be simplified, timely with rational degrees, suitable beneficiaries to avoid potential waste and misuse.
- Applications of financial market tools such as financial investments, credit, savings, insurance, reinsurance, mutual insurance, etc. in spending the capital, particularly temporarily unspent capital.
- Compliance of regulations of the Government, the Ministry of Finance and the State Bank on charter capital when the SRF is set up; operational provisions; contingent liability of annual budget; financial restrictions, etc.

How capital can be well maintained and developed at the management process are indicated by:

- Regular and well-organized supervision, checking and evaluation about the efficiency of mobilization, management, allocation and use of financial sources.
- Strict compliance of regulations on accounting, auditing, reporting and information transparency as per regulated by laws.
- Training and developing skills for staffs of the SRF, closely coordinating with existing financial, banking and non-governmental organizations within localities.
- Good organization measures and high responsibility to make sure that the SRF is always kept disclosed, clear, supervised and audited.

3.8 Organizational Designs

Of the five designed organization model of the SRF, the optimal choice is the 4-level model as it is nationwide integrated and decentralized down from the Center to communities. Its components consist of one Center-level SRF (macro level) and other SRFs at province, district and community levels.

The functions and duties of the macro level (*Centre*) are:

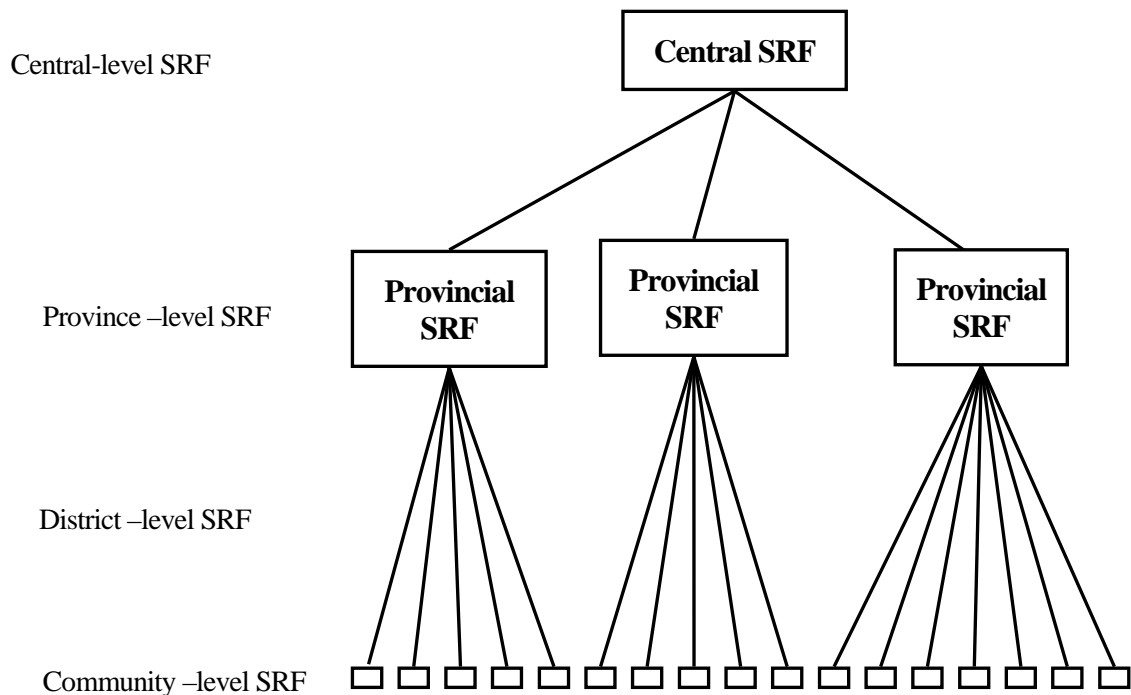
- “Promoting investments”, raising inputs and receiving financial sources for the SRF system.
- Managing macro-issues of the SRF.
- Transferring unspent capital to areas, within the SRF’s system, where extra capital is needed.
- Making wisely and safely unspent capital investments.
- The macro level does not cover direct natural disaster prevention duties (for example, rescue, aid or direct expenses of other natural disaster prevention activities).

Evidence from international experiences has indicated that the best modality of the SRF for natural disaster mitigation is one at the national-level. First, the national-level SRF will ensure enough sources to cover high losses after catastrophic events. Second, the SRF will be able to share risks between high vulnerable areas and low vulnerable ones so that it can make the SRF’s financial status sustainable and hunger eradication and poverty reduction better.

The functions and duties of the micro (community) level are:

- Directly raise collections for the SRF.
- Directly spending those collections on F&SP (*before, during and after a disaster*), for instance: (i) subsidizing for losses based on listed items; (ii) providing small loans (micro-credit) for livelihoods and rehabilitation of households.
- The selected type of micro-credit is loan turnover, in partnership with credit organizations, Women Unions, etc., for small household groups in villages and hamlets within the natural disaster mitigation framework.

By keeping a fixed and self-managed capital amount, communities will be able to exercise their self-control for the implementation of the “**four on-the-spot**” principle: strong decentralization, quick assistance, financial self-reliance, on-the-spot settlement and financial rule compliance when coping with natural disasters within their localities. Each micro level is estimated to have a start up capital of between 3000 USD to 6500 USD for loan turnover within a locality.



Proposed structure of SRF for natural disaster mitigation in Viet Nam

4. Feasibility Assessment

4.1 Feasibility of Management Organization

Viet Nam has a long history of natural disaster prevention and national unity in case of difficulties or natural disasters. Those favorable factors create a lot of potential conditions for natural disaster prevention. In addition, natural disaster prevention activities receive a lot of support and assistance from public and Government. Therefore, it is feasible to establish and maintain the financial self-reliance SRF in practice.

At present, Viet Nam has a solid and well performing natural disaster prevention system including a central-level F&SP executive committee and ministry, sector, province, district and community-level F&SP Executive Committees. The operations of this system base on a fairly sound legal system. Even though the operation efficiency of the FFSP is still not high and problematic the SRF is working in reality. This is a very good condition for the SRF to be put into practice.

The proposed the SRF modality is a 3-level structure, which corresponds to the current 3-level local authorities (not in district level). This is very realistic and suitable for the management decentralization in Viet Nam, improving the coordination, control and management of various levels and industries.

Center and province level will assure the SRF's sustained its performance, financial investments, capital balance and moderation and create trusty capital mobilizing agencies for natural disaster prevention.

Particularly, the design of the SRF strongly focuses on the community level. This makes the proposed SRF viable as the community is the unit closest to households and best understanding of their actual needs after disasters. This is an advantage of the SRF over the current FFSP (*which exists only at the province and district levels*). It is important to note that the community level is only financially assigned to manage expenditures that compensate part of losses, based listed items, after natural disasters and approves small loans, in close partnership with relevant organizations (*the Social Policy Bank, the Bank of Agriculture and Rural Development, the State Treasury, Farmer Unions, Women Unions, etc.*) for vulnerability reduction for households.

As many center and province-level experts have agreed, the setting up of the SRF is quite necessary and feasible. If the SRF is established, this financial scheme will be strongly supported by households, enterprises, government and particularly local authorities.

4.2 Feasibility of Techniques

As for the technical aspect, bearing the nature of a communal fund, the SRF does not work for profit purposes. The SRF's lofty goal, in reality, is to promote financial capacity in a resilient fashion to mitigate natural disasters for households. The proposed activities of the SRF are quite feasible due to some specific reasons as follows:

- 1) Market economy regulations, known as economic relations, markets (*financial and insurance markets*); rules and regulations to guide how participants in those markets behave, have been well improved in Viet Nam. They are important factors ensuring the use of advanced tools (*such as financial investments, savings, credit, insurance, reinsurance, mutual insurance, etc.*) necessary for the SRF to make its development sustainable.
- 2) The proposed SRF allows various financial, savings, credit, insurance, reinsurance, mutual insurance tools to be flexibly used to operate the SRF. Thus the SRF is independent of any particular tool or financial source. This feature can clearly ensure the SRF's sustainable development.
- 3) Capital proposals, which are divided into two types: Start up capital based on a 50/50 ratio and current capital based on voluntary and mandatory schemes, have been proved very scientific and realistic initiatives. That indicates the SRF is very highly feasible if supported by the Government and multilateral donors (*guarantee, materialistic support of mechanisms, policies, financial sources*) and vice versa. Whether the SRF is feasible is a question, which only depends on the will and approval of the Government and donors.
- 4) As for the scheme to provide initial capital of the SRF, the 50/50 split is rational for both national and international donors to mobilize various financial sources as well as the roles and assistance of partners (*the State, various governmental authorities and donors*) to take the SRF's establishment forward.
- 5) The proposed schemes, contribution levels to the start up capital and mandatory contributions, as discussed, are very well-proved and feasible. They all are clear, specific, realistic and rational in line with the real situation of socio-economic and market development in Viet Nam.

- 6) The SRF's feasibility is also indicated by financial capacity of donors (as the proposed levels do not exceed the financial capacity of the state budget, overseas donors, incomes of enterprises and households, etc.) and financial needs for disaster prevention of the SRF itself. The estimates and explanations are of high reliability, also showing the rationale and feasibility of the proposals.
- 7) The method to budget sources is also detailed by the report with forecasting all potential risks leading to an imbalanced situation of the SRF. Solutions to make the SRF feasible even in the worst case have also been well addressed.
- 8) Compulsory contributions, disaster prevention schemes, based on stipulated contributory levels, are always necessary to avoid adverse selection faced by the SRF. On the other hand, to avoid such situation, the SRF tends to share disaster risks among regions and pool more sources to increase capacity to cope with natural disasters in Viet Nam. Therefore, the rationale and feasibility of the proposed mandatory contributions to the SRF totally rely on if the Government issue necessary supportive decisions and legal documents. The existing Ordinance on F&SP, which force people of working ages and enterprises to pay contributions, shall be upgraded to a Law (*just by supplementing an article in the Law on F&SP to replace the Ordinance on F&SP*). Likewise, contributory mechanisms and levels shall be rationally adjusted.
- 9) The new initiatives of proposed contributions are quite realistic and feasible. Enterprises, according to the new scheme, are proposed to pay contributions of 0.02%-0.05% of the total charter capital (the previous regulation is 0.02% of the total charter capital^{vii}). Designed mechanisms, procedures and collection schemes will be simple, applicable and mandatory (*by laws*). At the same time, those mandatory contributions should be allocated as valid expenses for company income tax reduction for enterprises (*already available*).
- 10) Beneficiaries of the SRF are households, who account for about 76% of Viet Nam's population and more than 80% of those vulnerable to natural disasters live in rural areas. All contributors to the SRF are beneficiaries entitled to its benefits. Those features of the SRF, which is a socialized and communal fund, is obviously evidence of its feasibility and social significance.
- 11) 95% of post-disaster losses are attributable to floods, storms and water-related natural disasters. Therefore, the disaster mitigation approach, in the form of item guaranteed by the SRF as proposed, is feasible and suitable for the reality in Viet Nam.
- 12) Matched with the progress of the SRF in the context of market economy in Viet Nam, the management and allocation of the SRF's capital have also been well considered (*as referred to the attached calculation table*). Thus, the proposed SRF is technically efficient and sustained.

4.3 Potential Key Risks, Challenges and Solutions

1) Political Challenges

Lack of political support or weak political support cannot help put the SRF into practice regardless of how well it is designed. Therefore, the SRF needs really effective political support. This is indicated by following aspects:

- Mechanisms and policies of the Government are key factors.
- Local governmental authorities consider the SRF an effective financial vehicle to fulfill tasks of recovering damages after natural disasters for local households.
- The Standing Committee of National Assembly submits the National Assembly to approve the Law on Natural Disaster Prevention in which there are provisions on the SRF.
- The Government issues a Decree to guide and a decision on the SRF's establishment.
- The Ministry of Finance, the State Bank, the Ministry of Agriculture and Rural Development issue a joint-ministerial circular to guide the Government's Decree, a Decision on organizational and operational regulations of the SRF.
- Various provincial PC issue decisions on the specific implementation within their provinces. Various province, district and community level authorities manage and propagandize for the SRF.

2) Legal Risks

Being aware of the importance of natural disaster prevention activities, the Viet Nam's Government issued the Ordinance of F&SP, which is a legal basis for the setting up of the SRF.

Similarly, the SRF's establishment and operations should be also regulated by an article of a Law on F&SP (upgraded from the Ordinance of F&SP); or at least by a new Ordinance amending the current Ordinance on of Natural disaster Prevention in which there are provisions to replace and upgrade the FFSP to the SRF.

The above issues remain risks and challenges of the establishment of the SRF until it is approved by the Government. When the SRF is approved by the Government they are not problems at all. How to tackle such problems thoroughly depends on the will of the Vietnamese governmental system (State administration Ministries, the Government's Office, the Government, the Standing Committee of National Assembly and the National Assembly).

3) Risks from Households, Enterprises, National and International Donors

Direct financial support from the Government, in the long run, might not be necessary. But support from households, enterprises and non-governmental organizations are always vital as “bricks” laying the foundation for the SRF’s capital. The SRF will be at financial risk without those support sources.

Challenges here are that partners lack true awareness of natural perils and how they negatively influence growth and development of society, economy and enterprises. Their awareness, at present, is still simple and their assistance to cope with natural disasters are, in fact, ineffective and untimely, mainly based on *ex-post* approaches, charitable donations, “intact leaf covers torn leaf”, individual help and amateur activities without sustainable bases.

Also, small rebate benefits after calm years should create a good sign of faith with communities. After the start up period, information transparency at all processes (*from mobilization, management, allocation to usage*) and monitoring and controlling of the SRF shall be well carried out.

The benefit (e.g. sign of faith) and information flow for the SRF are very crucial and shall be regularly and continuously implemented to overcome those challenges.

4) Financial Risks and Challenges

Potential financial factors, which can put the SRF at risk, can be demonstrated by “gaps” observed at processes where the SRF’s capital is ***mobilized, managed, allocated and used*** for natural disaster mitigation.

The risk, at the input mobilization, faced by the SRF is also a big puzzle if without support from the Government, international donors, various governmental authorities, households as well as enterprises. Another big challenge also resides in the next processes of how to effectively manage, use and allocate the SRF for natural disaster mitigation goal.

Those financial risks and challenges could be settled if there are:

- Support from stakeholders, especially the state budget and international donors is available to provide financial support for the start up capital of the SRF and, if necessary, the Government might provide extra capital to make sure that the SRF can really run well in practice.
- A rational legal basis to manage the SRF.
- Focused training skills of management, supervision, interpretation, transparency.

5) Technique Design, Structure and Human Staff Risks

If the SRF's designed structure and technique are not effective and practical, its establishment would be a waste and might lead to unexpected losses.

Such bad situation can be avoided if a good, well-appraised and well-approved design, structure and organization can be implemented for the SRF. As discussed above, the SRF shall also be of a good structure organization and full techniques and skills that can be trained and transferred to its staffs.

Requirements on a skilled and ethical staff are indispensable. Those requirements can be achieved by developing well-prepared mechanisms and procedures that consist of recruitment, training and firing processes complying with market principles.

5. Conclusion and Recommendations

There are three approaches to finance catastrophic damages: (i) *ex-post* (in the form of government assistance, emergency donor relief, etc); (ii) *ex-ante* (in the form of insurance, microfinance and risk sharing in the stock market and (iii) financing the settlement expenditures that arise during natural disasters.

Of the above approaches, the *ex-post* is socially inefficient, because *ex-post* assistance is invariably generated under conditions of haste, disorder and disarray after natural disasters. It is, practically by definition, too little, too late. In addition, *ex-post* social relief for losses after natural disasters is much costly than *ex-ante* prevention. Therefore, an active *ex-ante* financing scheme shall be considered.

The SRF is believed to be an instrument really necessary to transfer, diversify and minimize risks for households' strengthened livelihoods, sustainable poverty reduction and sustainable development to mitigate catastrophic disasters for households within localities. The establishment of the SRF, therefore, is necessary and feasible.

Bearing the nature of a mutual-help fund, the SRF can share risk within localities, "insures" natural disaster risk through a supportive system. Households in areas not prone to natural disasters can support those in highly disaster-prone areas by contributing money to the SRF. As being highly communal and supported by the majority of households and various governmental authorities, the SRF will be feasible and sustainable.

The proposed SRF in Viet Nam is organized based on a 4-level model parallel with the 4-level governmental authority system, the 4-level state budget system and the current 4-level executive boards system of F&SP, with techniques, skills and instruments subject to mechanisms and schemes presented above. The SRF's tools allow it to comprehensively and flexibly use financial, insurance, reinsurance, mutual insurance, financial subsidy, micro-credit tools to make its capital stable and develop. The SRF's tools are also useful for households' improved risk mitigation, decreased vulnerability, increased *ex ante* and *ex post* natural disaster risk management, better recovered livelihoods and sustained development.

The key proposals to take the SRF forward include:

- **Legal Bases Shall Be Improved for the SRF's Introduction:** The Ordinance on F&SP shall be upgraded to the Law on F&SP. In the Law on F&SP, the scope of F&SP shall be upgraded to natural disaster prevention for households. Regulations on the FFSP shall be replaced by regulations on the SRF. The Government shall also issue a Decree providing guidelines on the implementation of the Law on Disaster Prevention and Decisions to set up and regulate the SRF's organization and operation. The Ministry of Finance, the State Bank and the Ministry of Agricultural and Rural Development shall issue Circulars and/or inter-ministerial Circulars to provide guidelines on the operation of the SRF.
- **Start up Capital Provided for the SRF:** To make the goals of sustainable development, hunger eradication and poverty reduction viable in Viet Nam, the Viet Nam's Government and donors shall have integrated agreements and conclusions in providing the SRF's start up capital (*based on a proposed 50/50 share*). The Vietnamese Government shall play a crucial role in deciding the establishment and development of the SRF; providing legal foundations, mechanisms, policies, start up capital, even part of operational expenditures and ensuring the SRF in case of financial risk due to catastrophic events.
- **Setting up, Training, Transferring and Operating the SRF within Localities:** Being is a new financial scheme (not only in Viet Nam but also the world), the SRF targets at natural disaster prevention (*ex ante*) as well as natural disaster mitigation (*ex post*). The SRF simultaneously uses subsidy-based schemes (to subsidize listed items) and market-based schemes (financial investments, micro credit, insurance, reinsurance, etc.). At the same time, the SRF performs two missions: "humane relief" for losses of affected households after natural disasters and "capital maintenance and development". As being not easy duties, they require a good preparation, from various governmental authorities from the center down to communities, in terms of thoughts, human resources, officials, training, etc. to put the SRF into effect.
- **In the Start up Period of the SRF:** To make the SRF's introduction and operation "smooth" in the beginning period of one – three years, the center shall provide regular and systematic technical assistance to localities as follows:
 - Guiding the establishment of the SRF.
 - Compiling training materials of operational skills of the SRF.
 - Training the SRF's management skills.
 - Setting up a website for information flow about the SRF, etc.

All the above issues, both in the short term and the long term, shall be "licensed" by competent organizations and supported by various governmental authorities, managers and experts from center down to communities. Especially, there shall be support of international donors led by the UNDP, WB, ADB. Finally, the SRF shall also be supported by households, enterprises and multilateral donors as most crucial factors to make its development sustainable.

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Endnote

ⁱ Storms, inundations and floods are of the factors responsible for poverty and hunger in Vietnam. In addition, a natural disaster is a good environment for re-poverty to grow. After a flood or storm of huge losses of human lives, assets and crop outputs, a lot of rural pro-poor households, who just pass the poverty threshold, are pushed back to their previous conditions. Actual data indicate that the frequency and scale of disasters have been keep increasing with more complicated changes.

ⁱⁱ The report on international experience is conducted by a group of Vietnamese and international experts, including Mr. Landis MacKellar, Mr. Marshall Silver, Mr. Jerry Skees, Dr. Duong Nghieu Bui, Dr. Hoang Tran Hau, MFM. Nguyen Huu Chi and other coordinators, by researching documentation from printed versions, the Internet and direct workshops and discussions. The findings are presented in sub-reports on international experiences. In this report, we only provide summaries of key points based on the main conclusions achieved. Details are referred to the full reports.

ⁱⁱⁱ CAT-bond is a technical but common term. From now on, this report will use this term by its English origin of CAT-bond.

^{iv} According to the Decree 50/CP dated 10 May 1997. Vietnamese citizens (*males from 18 to 60 years old and females from 18 to 55 years old*) and domestic and international business entities within a locality have to pay a compulsory contribution to the local FFSP. The contribution level stipulated for a member of an agricultural household is one kilo of rice and for a non-agricultural household is two kilos of rice per member per year. Enterprises of various business sectors contribute 0.02% of their business capital but not over VND5 million per year.

^v Surveys and overseas & domestic insurance schemes all indicate that one of the biggest problems is to estimate the subsidy value for households, for instance, who are entitled to subsidies and how much. This issue is very crucial, needed to be agreed in advance and disclosed. These issues will be studied and detailed when designing the SRF's specific operations.

^{vi} In practice, the SRF's unspent capital can be invested in financial investments and real estate. In the short time, the SRF should only invest in financial investments but not real estate. In financial investments, only safe, listed and solvent investments within valid investment ratios should be approved.

^{vii} Charter capital is recorded in the business registration of set up enterprises, public listed and managed by licensing agencies. Business capital is a financial term, equal to the total capital sources (at the end of a fiscal period) available for doing business, including charter capital, loans, capital in circulation, etc. of an enterprise. Thus, charter capital is fixed and subject to decisions to change the charter capital of enterprises while business capital is variable and complex for calculation. By changing the calculation object, the collection mechanism can be much more simplified. On the other hand, business capital is always higher than charter capital. Hence, the contribution ration of enterprises can increase from 0.02% to 0.05%, while the specific contribution ratio remains the same.