



Lao People's Democratic Republic

Peace Independence Democracy Unity Prosperity

The National Committee for Disaster Prevention and Control (NCDPC)

2019 Emergency Disaster Preparedness and Response Plan



Vientiane capital, July 2019

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Preface

The growth of global economy and an increase of population especially in the developing countries have led to an increasing risk of natural disasters. The causes derived from climate change namely floods, earthquake, Tsunami, storm, etc. have become a problem for all and spreads throughout the world in both direct and indirect ways. It is unavoidable especially the negative impact. Such problems become a serious threat to the lives and asset of human beings in the world. Specifically, it includes the economy, society, ecosystem and the natural environment. It is also an obstacle, challenge and barrier that put burden on the progress and development. Lao PDR is one of the Asian countries or the whole world that get serious impacts from natural disaster especially the problems of flood, storm and drought. Pests destroy the crop yields. Each year, the government spends huge amount of budget for an emergency relief and rescue affected by the natural disasters.

To make sure that the response to disaster is implemented in an effective, efficient, rapid and timely manners, the NCDPC develops an Emergency Preparedness and Response Plans as direction and framework for relevant sectors in both central and local levels including the international development partners to be able to jointly and systematically work during the emergency support and rehabilitation period after the disaster in agreement with the guidance and the working approach.

The NCDPC hopes that under this readiness preparation plan, it will help the emergency support and rehabilitation after disaster periods. It is to ensure that the support is prompt and on time whereas the lives and asset of people are safe.

THE MINISTER
The President of NCDPC

PART I

THE SITUATION AND LIKELIHOODS OF DISASTER

1. The Global Situation and Likelihoods of Disaster

It has been noticed that the climate change over the last decades has had an upward trend to be more frequent and serious. Countries around the world have faced the problems of natural disaster namely flood, soil erosion, drought, typhoon, earthquake, forest fire, volcanic eruption, etc. which have caused massive damages and losses to the lives, asset, economy, society and the environment. Specifically, in **2017**, the disaster occurred more than 200 times in the Asia-Pacific region. More than 66.7 million people affected. 6,543 people died (As reported from **UNISDR 2017**). For the ASEAN region, in 2018, the disaster occurred more than 389 times. More than 26 million people were affected. 2,363 people. 947 people disappeared. More than 1.6 million people lacked shelters. 1.7 million houses were damaged (As reported by **AHA center, 2018**).

For the climate and disaster trends in 2019, according to the information and message from the Department of Meteorology and Hydrology under the Ministry of Natural Resources and Environment, it is informed that there would be disaster risks in the air as a result of El Niño Southern Oscillation (**ENSO**) phenomenon in the **Neutral** condition (The Temperature Change in the Ocean), ENSO in the El Niño (Drought) and ENSO in **La Niña** which is the incident of heavy raining. The incident of ENSO in each condition in 2019 may lead to climate risk. Within this, it could create disasters in the forms of hot weather, drought, storm, heavy rain and flood in different countries around the world especially in the Asia-Pacific region including Lao PDR. The ENSO phenomenon in El Niño has an impact on tropical hurricane. The tropical hurricane that occurs in the areas of Pacific Ocean on the North West and the South China sea will be lower than the average (On average: 25 – 27 hurricanes per year), the movement direction of storm will mostly go to Japan (The presentation of Department of Meteorology on 8 May 2019).

2. The situation and the disaster trends in Lao PDR.

2.1 Risks and disaster in Lao PDR.

According to the geographical location, Lao PDR is among the countries situating in the Asia-Pacific region which has been vastly affected by natural disasters namely tropical storm, flood, soil erosion, drought, production output destroyed by pests, etc. Those disasters create damages to the lives and assets of people, economy, society and the environment.

In 2018, there were several disasters including the natural and human-made disasters namely: floods, storms, soil erosion, forest fire, epidemics, production output destroyed by pests, etc. The notorious disaster was the flood caused by the seasonal weather of 2018 and the tropical hurricane of Son-Tinh and Bebinca which blew across Lao PDR. With a short period of time, it had been continuously and heavily raining so that the level of water in small and big rivers such as Mekong river and its tributaries had been increasing and higher than the dangerous point. As a result, it flew into the lower plain areas. In the mountainous areas, the forest water flew into villages and houses of people so that the river bank collapsed; soil was eroded; many roads and bridges were cut off. It directly affected the lives and asset of people; it damaged the infrastructure, economy, society and the environment in different provinces including Vientiane capital and after that, the dam of Xepian-Xenamnoi was broken so it had serious impacts on the people of Sanamxai District, Attapeu Province. Such incident, it directly affected people in 17 provinces and 1 Vientiane Capital covering 131 districts, 2,475 villages, 134,226 households and 619,024 people and 90 people died (Within this, 26 people were disappeared). More than 1,800 houses were damaged; it damaged the agricultural practice, communication and transportation infrastructure, schools, health centers, water supply system, electricity, etc. The total value of loss and damage amounted to 3,167.46 billion Kip whereas the amount of budget needed for rehabilitation activities after the disaster was approximately 4,423 billion Kip (The Need Assessment Report after the disaster – PDNA, 2018)

2.2 The challenges of previous implementation

- The disaster that occurred in 2018 was serious and it happened throughout the country. It created serious and huge impacts. It could be said that this was the first time within ten-years-round. There was no lesson learnt on how to alert, how to cope with, how to respond, and how to rehabilitate;

- The emergency aid was difficult and could not respond to the situation since it lacked enough resources to cope with and to rescue the lives and asset of people in a timely manner.
- The problems in terms of weather condition, storms, raining and the cut-off roads and bridges were the challenges for the emergency aid and relief especially in Sanamxai District, Attapeu Province.
- The central level sets up an ad-hoc team to solve the problem of national disaster and from this point, the sector in the national and local levels have the decision to appoint the technical team according to their roles and duties. For the actual implementation in the previous time, it was seen that there was not enough collaboration.
- For the evaluation and rehabilitation after the disaster, it was seen that it was slow and delayed because the tasks and the monitoring plan for each task were not clear enough. The coordination between sectors was not clear. The budget was limited; It lacked legislations for the management as well as the budget to use in case of emergency and for rehabilitation;
- For the infrastructure re-setting, it was seen that some contractors faced limitation in terms of technical expertise, machineries and the investment capital to spend in advance in case the government could not provide money on time. Apart from that, the hydropower development companies had complicated funding mechanism. The clearing of areas for building temporary and permanent shelters, the transportation and the assembly of temporary houses by the contacted companies were slow and delayed so that the movement of people from the tents to the temporary dormitories was also delayed accordingly.
- The mobilization of grant donated by different sectors in society was clearly determined and detailed in terms of types and quantity in each period. The stocking system was not in order so some donated items such as the second-hand clothes were not clean so it might bring some disease to people if such clothes were distributed to people. Moreover, some drinks, snacks, etc. were already expired.
- The news about the regeneration including the aid provided to people was not continuously broadcast. Therefore, people complained whereas bad people used the social media to impute to our government.

2.3 Weather Conditions, Risk Assessment and Disaster Trends In 2019

1) Weather condition

According to the information from the analysis for 2019 from the Department of Meteorology and Hydrology, Ministry of Natural Resources and Environment (MoNRE), it is informed that in the early February 2019, the ENSO phenomenon closes to the equator in Pacific Ocean was still in the condition of **La Niña** which had weak power where the average temperature on the ocean surface was unusual and its value was less than zero. After that, its power would be weaker and became neutral condition where the average temperature on the ocean surface was unusual and its value was close to zero over the period from the end of April to September 2019. Then, its power increased and became the condition of El Niño phenomenon.

In conclusion, the weather in 2019 will be in the condition of El Niño where its power is between weak and neutral; the weather will be hotter than the usual level; the rainfall will be mostly lower the usual level. However, some local areas will have rainfall in a usual level or even a little bit higher. The tropical hurricane will occur in the North West of Pacific Ocean and the South China sea. It will be lower the average level. Totally there will be 22 – 24 hurricanes. Within this, 12 – 14 hurricanes had power in the same level as typhoon and 1 – 2 hurricanes will move through the central and northern parts of Lao PDR from the end of August to September 2019 or the beginning of October 2019.

2) The Risk Analysis and Likelihood of Disaster

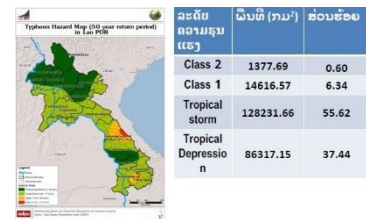
Based on the climate condition mentioned above, it is seen that the weather in each month of 2019 is changing in different periods of time so that there may not be rain, or it may be dry in some areas. In some areas, it may be cold and directly affect the people and animals. In some areas, there may be a lot raining so that they could have soil erosion, flash flood (rapid flooding) and the villages located along river banks will be flooded. According to information about the risk of national disaster which was developed in 2010 by the Ministry of Labor and Social Welfare and based on the changing weather, the significant areas affected by disaster can be determined as follows:

+ The condition of areas where are expected to be flooded: According to the flood map developed in 2010, there are 8 rivers which are areas vulnerable to the flood namely: Namou, Namngeum, Namngiap, Namsan, Xebangfai, Xebanghiang, Xedone and Xekong. According to the result from information analysis, it is informed that many districts located

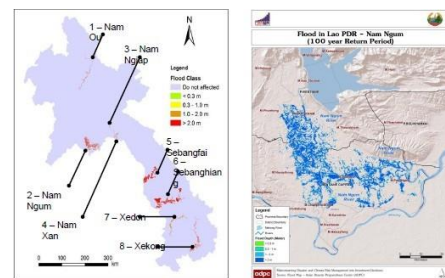


along the banks of these 8 rivers are risky to be flooded with different depth and flooded areas. It is predicted that the population living in the risky areas of 8 rivers cannot help themselves or they still need to rely on others. There are totally 115,322 people who might be affected by the disaster from the flood. Within this, approximately 77% of them are falling in the flooding areas with the depth of higher or equal to 2 meters. Apart from this, the infrastructure that are in the risk and may be affected by the flood are namely: in the housing sector and people's houses, the agricultural sector, hospitals/medical clinics, schools, sources of water for drinking and using, etc.

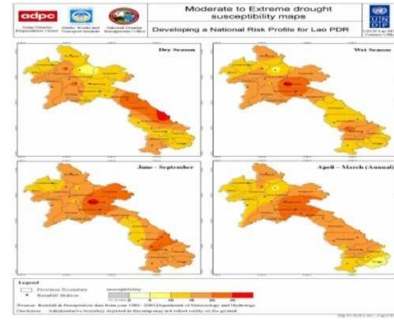
+ The condition of areas where are expected to be eroded: The main driver leading to soil erosion is mostly because of heavy rain and other significant factors namely: the areas with slope and the use of land. Soil erosion has impacts on the transportation infrastructure, people's shelters, etc. The highly risk areas with vulnerable to soil erosion covering from 10% to 25% of areas are in provinces namely: Xekong, Attapeu, Xaisomboun and Bolikhamxay. The risk areas with vulnerable to soil erosion covering from 5% to 10% of areas are in provinces namely: Khammouan, Salavan and Phongsaly.



+ The condition of areas where there might be storms: There are different kinds of storms such as: Typhoon or Cyclone and tropical storms. Such storms will cause heavy wind and rain with hail which may affect and damage the lives and asset of people, government buildings, hospitals, agricultural production areas, etc. According to the result from the risk assessment of national disaster, it is predicted that there are numbers of populations who are expected to be affected by such



storms. Specifically, about 67.96% may be affected by the tropical storms with the wind speed of 63.17 Km/h; 28.45% will be affected by the low pressure of tropical weather with the wind speed of 0 – 62 Km/h; About 3.53% will be affected by the type-1 storm with the wind speed of between 119 – 153 Km/h; and 0.06% will be affected by the type-2 storm with the wind speed of between 154 – 177 Km/h. Most of these are in Khammouan province.



+ **The condition of areas to have droughts:** The impact from droughts mostly and directly damages the agricultural sector and the food security, the livelihood of people, sources of drinking and use water and sanitation. According to the information concerning the risk of national disaster, the level of occurring drought was analyzed such as: Medium and serious levels as follows since it often occurs in provinces:

- During the Dry Season, between October and March, it may occur in areas of Oudomxai, Vientiane, Khammouan, Bolikhamxay and Savannakhet Provinces;
- During the Rainy Season, between April and September, it may occur in Xiengkhuang Province, most of Xaisomboun Province, the areas close to Bolikhamxai Province, Donghen areas in Savannakhet Province;
- During the Rainy Season, between June to September, it may occur in Xiengkhuang Province, most of Houaphan and Xaisomboun Provinces and the North of Bolikhamxai, the East of Savannakhet and the North of Salavan Provinces;
- For 1 year, between April and March, it may occur in Xiengkhuang and surrounding areas.

3 The Planning Based on the Assumptions/Predictions

After the consultation and review of documents concerning the risk assessment of national disaster and the disaster incidents occurring over the previous time, the national committee for disaster prevention and control agreed that with the aim to respond to the disaster occurring in Lao PDR, it needs to consider the prediction and assumption of incidents when do the planning as follows:

3.1 The Prediction of Incidents

The storm hits the North, Central and South of Laos causing flood and infrastructure damages in different provinces throughout Laos and it also affected more than **250,000** people.

The size of damages caused by the incidents pushed the government to rely on the foreign aid through the mechanism of NCDPC where there was cooperation with international organizations from both domestic and overseas especially from the ASEAN region. The readiness measures that were operated in such incident is still a tool to respond to the storms and flood with smaller size and it can also respond to other disasters namely: earthquake, soil erosion, drought and epidemics.

3.2 Assumption concerning the planning

The result from implementing humanitarian activities and the priority needs:

- Most affected people live in the areas where it was difficult to access. The public health services were limited. Most people were poor, most of them relied on agricultural production for their livelihood. There was a risk of having problems from malnutrition. People had a risk to vulnerable to the problems of storms, flood, soil erosion and drought.
- There was a need of humanitarian aid to solve different problems after the disaster had occurred for instance: Houses, infrastructure, livelihood, transportation and communication systems, drinking and use water systems and sanitation were damaged; The source of water was dirty; Food supplies were destroyed; The education and public health systems were damaged; the ecosystem and the access to the natural resources which were the sources of food were also affected.
- The consequence from the loss of plants and seeds, the destructive livelihood, the outbreak of epidemics affected food supplies and nutrition. It also affected the next season;
- There were increasing risks for children, women and elderly, disabled people and increasing disease;
- The priority needs were: drinking water, the regeneration of water sources, food supplies, temporary shelters, the finding and rescue of disappeared people.

+ The mechanism for solving problems or Incident Handling:

- The affected community has some experience in responding to the occurring disaster. The solidarity of people in solving problems was good; there were volunteers to help on time and the resources and food supplies were divided within the community or between communities. The movement of shelters

relied on relatives and neighbors. The house restoration and repairing could be done by using the available resources within local or nearby areas.

+ The response to the incidents by the government

- It was ready to cope with the incidents immediately through the existing system of management planning in the national, provincial and village levels. There was limitation in providing aid because of the ability to access the source of funding. The aid would go to the most seriously affected villages. However, the aid from abroad could be provided to all 75,000 affected people who needed humanitarian aid. The military and different ministries provided resources including the air transportation, food supplies, medicines, communication equipment and others from the central and local levels. Apart from that, the government could also ask for humanitarian aid (AHA Center) from ASEAN as well as the aid through the mechanism of IASC to support in terms of equipment and fund to respond to the disaster. Such aid could also be in the form of bilateral cooperation with ASEAN member countries.

+ Gaps and Limitations

- The response to the incidents was limited because there were numbers of difficulties especially the ability the people affected by the disaster. The response to the incident was delayed.
- Even though the government already had the system to respond to the emergency incidents, there was limitation in terms of the capacity to collect information, analyze problems and deliver information from the local to national levels;
- There was no communication system to connect between the Emergency Operations Center (EOC) of the secretariat of NCDPC, the EOC center of Ministry of Health, Police office, and the Military. The telephone signal was not stable especially in the incident areas. However, EOC center of the secretariat of NCDPC had connected to EOC of AHA but not yet connected to the information center of international partners such as UN for the development, etc.

PART II

THE DISASTER RESPONSIVENESS STRATEGIES

1. Objectives

The overall objective of readiness plan to respond to the disaster incident is to be a strategy and tool of Lao PDR in implementing and providing aid and solutions to the emergency incidents and rehabilitating the situation after the disaster. It should make sure that the implementation is efficient, on time and has good coordination based on the agreement concerning the sharing of responsibilities in national, local, provincial, district and village levels.

The specific goals and objectives of readiness plan to respond to the disaster will clearly identify the roles and responsibilities of sectors that have relationship with the committee for disaster prevention and control in each level including the coordination mechanism to achieve the following tasks:

- 1) **Make sure that the people affected by disaster are helped quickly and safe especially the groups of people who exposed to high risk namely; children, elderlies, pregnant women and disabled people. Within this, it includes:**
 - Quickly search or explore and rescue and then move them to the safe places;
 - Quickly provide food to the sufferers to prevent from malnutrition problems;
 - Quickly support them in terms of temporary shelters for families who escape as their houses are damaged.
 - Quickly provide basic aid namely: drinking water, clean water for use, hygienic care, health care, etc. and make sure that the sufferers have good health and are not infected with disease.

- 2) **Make sure that there is a smooth management of information and coordination mechanism in the evaluation and monitoring of disaster; Distinguish and identify the target groups with high risk so that the aid can be provided. In this:**
 - Act immediately for the evaluation of loss and urgent needs and then quickly offer the aid after the disaster incident;
 - There is a systematic database supporting the analysis and reporting; Quickly offer the aid on time; Use satellite images from related sectors within the country and from abroad;
 - The secretariat of NCDPC collaborate with related sectors in the national and local levels to manage the information and the reporting.

- 3) Make sure that the urgent aid and solutions is sustainable so that it can support the rehabilitation activities after the disaster incidents and make the sufferers become stronger. It also needs to make sure that the urgent aid will not increase the weakness for the community and the development in the long term.

2. The Scope of Plan

The readiness plan to respond to the disaster incident has the scope of implementation as follows:

- 1) It is a strategic tool for the disaster prevention and control committee in each level including related sectors and international partners working on the prevention and control of disaster in Lao PDR to provide urgent aid and solutions as well as implement rehabilitation activities after the disaster incident;
- 2) Use for supporting and solving the disaster throughout the country after it occurs by the nature and human.

3. The Principles Concerning the Response to Disaster

- Be coherent with the direction, policy, constitution, laws, treaty, and international agreement which Lao PDR is a signatory country;
- Make sure that there is equality, justice, transparency and accountability;
- Make sure that the supply of information concerning meteorology, hydrology, risks, and other information related to disaster should be clear, continuous, fast and on time.
- Make sure that there is participation by all sectors in society and the collaboration between ministries, organizations and local administrative authority.

4. The standard working procedures for responding to the disaster

These procedures are determined to make sure that the coordination concerning the response to the disaster incident is quick, on-time, effective and efficient so that it could reduce the mortality as well as the impacts. These will be an instruction supporting laws, regulations and the procedure for managing the disaster and the organizations responding to the emergency incidents.

The Department of Social Welfare, Ministry of Labor and Social Welfare, in the name of the secretariat of NCDPC and under the direction of the NCDPC's chairman, act as a central for coordination regarding the urgent aid, solutions and rehabilitation after the disaster incident. They have the responsibility as follows:

- Be stationed for 24 hours at the time before and when the disaster incident occurs in order to monitor the situation of disaster. Keep watching the danger closely and propose the way to respond on time;

- Prepare documents for the NCDPC's Chairman so that he or she can propose the government to declare the disaster areas, issue an order for prevention, control and provide the urgent aid, solutions and rehabilitation after the disaster incident;
- Be a central for coordinating with related organizations so that it can evaluate the situation and report on the damage and the need; Propose the way and measure to provide aid and solve the serious impact in the early stage;
- Be a central for coordinating the implementation of technical measure. It includes the exploring, rescuing, medication, providing of shelters, food, water, relief stuff to the sufferers.
- Coordinate and collaborate with related sectors to mobilize the aid from the whole society, the support in terms of forces, techniques, fund, objects, etc. from abroad according to the agreement of government for the purpose of emergency rescue and relief.

The standard working procedure for responding to the disaster is conducted in 3 periods below:

- Period 1: Surveillance, Monitoring and Alert;
- Period 2: Control and provide emergency aid;
- Period 3: Post-Disaster Recovery

4.1 Period 1. Surveillance, Monitoring and Alert

In this period, it focuses on surveillance, monitoring and advance alert concerning the disaster that may happen naturally. It also includes the rechecking of readiness in terms of equipment, material, vehicles, and the reserve of relief stuff for responding to the disaster; It also needs to check the readiness of emergency supporting teams namely: the emergency evaluation team, the exploration and rescue team, the medical support and health service team, etc.

1) The Monitoring of Weather and Advance Alert

The Department of Meteorology and Hydrology, Ministry of Natural Resources and Environment monitors, forecasts and sends out the alert concerning the weather, storms, rainfall, and the water level in the rivers which may lead to disaster and affect the lives, the asset of government, collectives and people so that the society, community and concerned organizations can know and get ready to avoid damage and loss as a result of such disaster.

The system for disseminating information and warning alarm



(Sources: Department of Meteorology and Hydrology)

The Department of Social Welfare under the Ministry of Labor and Social Welfare, which is the secretariat of NCDPC, will send out the warning alarm according to the notification from the Department of Meteorology and Hydrology. Specifically, the notice from the chairman of NCDPC is sent to the other ministries that are the members of NCDPC as well as to the provincial committee for disaster prevention and control so that the notice can be further sent to the committee in the district and village levels.

For the advance alert, the advance notice will be issued whereas the attention areas will be announced through the media so that people, communities, organizations and all sectors have time to prepare themselves in advance to respond to the possible disaster.

In case, there is disaster covering the areas of many villages, the District Mayor, Provincial Governor, or the City Mayor must alert and announce the attention areas according to the proposal from the District Committee for Disaster Prevention and Control.

In case, there is disaster covering the areas of many districts, the provincial governor or the Capital city governor must alert and announce the attention areas according to the proposal from the Provincial Committee for Disaster Prevention and Control.

In case, there is disaster covering the areas of many provinces, the government must alert and announce the attention areas according to the proposal from the National Committee for Disaster Prevention and Control.

The disaster alert is based on the forecast information, the monitoring and prediction of related sector especially the Department of Meteorology and Hydrology, Ministry of Natural Resources and Environment.

2) The Emergency Operations Center (EOC)

The Emergency Operations Center (EOC) is located at the Department of Social Welfare, the Ministry of Labor and Social Welfare and under the responsibility of NCDPC secretariat. It is used for controlling the emergency disaster including the monitoring and reporting about the situation of disaster. It is also used for communicating with government agencies and the international partners that are responsible for the disaster management within and outside the country (ASEAN Coordinating Center for Humanitarian Assistance on disaster management - AHA).

EOC could be established at the Ministry of Labor and Social Welfare or at another specifically determined place. The Head of secretariat of NCDPC in the name of EOC head is directed and assigned by NCDPC and has the responsibility as follows:

- Announce the use of EOC;
- Control the operations of EOC;
- Place personnel into EOC;
- Send out alert to the disaster management focal points in the national and provincial levels as well as the international partners according to the information from the Department of Meteorology and Hydrology.

For the operation, it collaborates with the disaster management focal points in the national and provincial levels to gather information about the impacts, damages and urgent needs and then report to the chairman of NCDPC so that it can have the direction on how to implement.

The Department of Social Welfare, the Secretariat of NCDPC, in the name of agency responsible for EOC, will call a meeting in the technical level by inviting the NCDPC coordinators from different ministries to attend the meeting at EOC so that they can report on the emergency situations, discuss and identify the plan to respond to the emergency and then request the chairman of NCDPC for the direction of how to implement.



ເນື້ອໃນ:
 - ຂໍ້ມູນພະຍາໄດ້ຜູ້ປ່ວຍ
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 - ນໍາໃຊ້ເຄື່ອງມືແບບຟອມ SASOP

4.2 Period 2. The Control and Provision of Emergency Aid During the Disaster Incidents

The control and provision of emergency aid during the disaster incident is the limitation of disaster that is happening in order to avoid serious impacts or mass losses on the health, lives and asset of people. It needs to do as follows:

1. Ensure the safety;
2. Emergency assistance;
3. The lost-found or searching and rescue;
4. The assessment of losses and urgent needs;
5. The relief aid;
6. The request for aid;
7. The facilitation of aid from abroad;
8. The management of aid;
9. The repairing of necessary infrastructure;
10. The announcement as 'Disaster Affected Area';
11. The announcement to cancel disaster areas;
12. Measure for controlling disaster.

1). Ensuring of Safety

The Committee for Disaster Prevention and Control of each level collaborate with related ministries, organizations. local administrative authorities to implement the measure for ensuring the safety in terms of health, lives, and asset of sufferers and the people who come to help.

2). Emergency Assistance

If the disaster occurs in any local area, that local area must have ownership to rush to provide emergency aid on-time.

The Committee for Disaster Prevention and Control of each level collaborates with related ministries, organizations, local administrative authorities including individuals, legal entities and organization within the country and from abroad to provide emergency aid namely temporary shelters, food, drinking water, use water, emergency medical services, clothes, etc. to the sufferers.

In the case of serious disaster, the National Committee for Disaster Prevention and Control collaborate with related local administrative authorities to set up the Emergency Operations Center in the national level and local level where the disaster incident occur; allocate and provide temporary shelters, warehouses, medical services, logistics and the distribution of emergency relief stuff to all sufferers and on time.

3). Lost-found / Searching and Rescue

When the disaster incident occurs, the concerned Committee for Disaster Prevention and Control collaborated with the local administrative authorities including all sectors in society to help explore or search, rescue and move the sufferers to the safe or allocated places.

In case, the serious disaster occurs, the emergency operations center must have ownership in directing and control all of assistance.

4). The Evaluation of Loss and Urgent Needs

The concerned Committee for Disaster Prevention and Control collaborated with the local administrative authority where the disaster incident occurs, sections and all sectors to conduct the evaluation of loss and urgent needs in the beginning so that the emergency aid plan can be created.

5). The aid and relief

The concerned Committee for Disaster Prevention and Control have ownership to collaborate with the local administrative authority where the disaster incident occurs, sections and all sectors to provide aid and relief to the sufferers especially the health care service, consumption stuff, other things necessary for living, and the allocation of shelters.

6). The Request for Aid

In case, the disaster incident occurs, if it is necessary, the concerned Committee for Disaster Prevention and Control and the local administrative authority where the disaster

incident occurs can request for aid from any section and sector in exploring or searching, rescuing and relieving the sufferers.

In case, it is necessary to request for aid from abroad, the National Committee for Disaster Prevention and Control would propose to the government for consideration.

7). The facilitation of foreign aid

The National Committee for Disaster Prevention and Control collaborate with related ministries, organizations and the local administrative authorities to facilitate the import of personnel namely: news reporters, medics, rescuers, rescue team and the import of vehicles, equipment, medicine, consumption stuff, etc. donated by individuals, international organizations, NGOs, civil society organizations, friendship countries, and from the region in accordance with the provisions in laws, treaties, and international agreement where Lao P.D.R. is a signatory country. For the vehicles, equipment, medicine, consumption stuff, etc. which are donated stuff, the tax and other obligation fees are exempted.

In addition, it needs to facilitate when personnel, vehicles and equipment in returning to their country of origins.

8) The Management of Aid

The government integrally manages all kinds of aid from domestic and abroad. It assigns the Committee for Disaster Prevention and Control of each level to have a direct responsibility and ownership to collaborate with the local administrative authority where the disaster incident occurs and related sectors,

For the personnel that come to help, it needs to follow the provision and be under the management of relate Committee for Disaster Prevention and Control.

9) The Repairing of Necessary Infrastructure

The related sector shall use a measure for urgently repairing the necessary infrastructure so that, in the beginning, it can ensure that a proper solution to the disaster is reflected to the real circumstance and certified by the related Committee for Disaster Prevention and Control.

10). The Announcement as 'Disaster-Affected Area'

The disaster area is a certain area suffered from the disaster incident. It affects and create a lot of damages to the health, lives, asset of government, collectives, the environment and infrastructure.

In case, there is disaster covering the areas of many villages, the District Maupr, Municipal Governor, or the city Mayor must announce as 'Disaster-Affected Area' in accordance with the proposal from the District Committee for Disaster Prevention and Control.

In case, there is disaster covering the areas of many districts, the provincial governor or Capital city governor must announce the disaster areas according to the proposal from the Provincial Committee for Disaster Prevention and Control.

In case, there is disaster covering the areas of many provinces, the government must announce the disaster areas according to the proposal from the National Committee for Disaster Prevention and Control.

11). The Announcement to Cancel Disaster areas

The government or local administrative authority announces to cancel the disaster areas based on its responsibilities after the disaster incident calms down according to the proposal from related Committee for Disaster Prevention and Control.

12). Measure for Controlling Disaster

In case, the natural disaster incident occurs, the concerned Committee for Disaster Prevention and Control collaborate with the local administrative authority where the disaster occurs, sections and all sectors to scrutinize and use the method and measure for controlling disaster and at the same time, mobilize people and organizations to contribute in forms of intelligence, manpower, fund, vehicles, and necessary equipment for mitigating the impacts from such disaster.

In case, the disaster is caused by human namely, chemical leaking, soil erosion, flood, and deluge from certain investment project or activity, the developer of investment project or the person who conduct such activity shall be liable for solving the cause and the impact from such incident and notify the government, local administrative authorities, related sector and the media on time.

In case, the disaster incident occurs in many local areas at the same time, the concerned Committee for Disaster Prevention and Control collaborate with the local administrative authority where the disaster occurs, sections and all sectors to find the way and measure for mitigating the impacts on time.

4.3 Period 3: The Disaster Recovery

The recovery after disaster is the treatment of livelihood for the sufferers. It includes the repairing, building and restoring of infrastructure affected and/or damaged by the disaster back to the normal situation or even better. The actions to be taken are as follow:

1. The Post-Disaster Needs Assessment;
2. The Development of Post-Disaster Recovering Plan;
3. The Post-Disaster Recovery;
4. The Monitoring After Disaster;

1). The Post-Disaster Needs Assessment

The evaluation of needs after disaster is the valuation of loss or damages and the needs to treat the livelihood. It includes the restoration, repairing and building of infrastructure damaged from the disaster.

The concerned Committee for Disaster Prevention and Control collaborate with the local administrative authority where the disaster occurs, sections and all sectors to conduct the evaluation of needs after the disaster incident occurs so that it can restore and provide different aid.

2). The Development of Post-Disaster Recovering Plan

The development of restoration plan after disaster incident is the planning based on the evaluation of needs after the disaster incident. It is to treat the livelihood and restore infrastructure in the areas affected by the disaster.

The Provincial Committee for Disaster Prevention and Control collaborate with the local administrative authority where the disaster occurs and all sectors to develop the restoration plan after the disaster incident and then propose it to the provincial governor to include in the socio-economic development plan and the annual budget plan. After that, it can be further proposed to the Provincial People's Court to consider and approve.

In case, the disaster covers many provinces, or when the serious disaster occurs, the National Committee for Disaster Prevention and Control collaborate with concerned ministries, organizations and local administrative authorities to develop the restoration plan and propose to the government and the National Assembly respectively so that it can be considered and approved.

3). The Post-Disaster Recovery

The local administrative authority, at the place where the disaster incident occurs, has ownership in implementing the restoration plan which is already approved by collaborating with concerned sections and all sectors.

The individuals, legal entities or organizations, that do the production, run business and services or any activities causing disaster, shall be liable for solving and restoring the infrastructure namely production areas, residential shelters, cultural heritages, historical sites

and antiques that are damaged. In addition, it must also compensate the loss or damage to the sufferers under the monitoring and inspection of concerned committee for disaster management.

4). The Monitoring After Disaster

The Provincial and District Committees for Disaster Prevention and Control have the ownership to monitor and evaluate the implementation of Post-disaster restoration plan by collaborating with the local administrative authority where the disaster occurs, sections and all sectors and then report to the provincial administrative authority.

In case, the disaster covers many provinces, or when the serious disaster occurs, the National Committee for Disaster Prevention and Control has the ownership to monitor and evaluate the implementation of post-disaster restoration plan by collaborating with ministries, organizations, and provincial administrative authority and then further report to the government.

5. An Overall Management and Coordination

The government takes a lead and coordinates the readiness preparation activities and provide the emergency aid and solutions through the District, Provincial and National Committees for Disaster Management

The Department of Social Welfare, in the name of secretariat of NCDPC, is a central for collaborating with ministries, national-level-equivalent organizations, local administrative authorities and international organizations to scrutinize, scale up and provide the response and solutions to the impacts from disaster on the asset and lives of people throughout the country.

The roles and duties of NCDPC secretariat include:

- NCDPC secretariat, the Department of Social Welfare, is a main assistant for NCDPC to prevent and control disaster at the time when there is preparation before it occurs, during the time when there is emergency response and during the time when there is restoration after it occurs.
- Be a focal point for coordinating with different sectors from domestic and abroad in preventing and controlling disaster especially with ministries and concerned organizations as well as its vertical line in local level. This is to implement the measure for readiness preparation, emergency response, prevention and mitigation of disaster risks.

- Call a technical meeting within the focal-point team supporting NCDPC when the emergency disaster occurs. It is to discuss, summarize and propose the measure for emergency aid;
- Coordinate and provide information and advance alert concerning the disasters that may occur;
- Be stationed for 24 hours when there is disaster alert in order to monitor the situation and closely keep watching the danger and then propose the way to respond and solve on time;
- Be a central for coordinating with international and regional partners such as the UN for International Disaster-Mitigation Strategy, the ASEAN Disaster Management Committee, etc.

For the roles and duties of NCDPC members, it is clearly determined in the decision of NCDPC chairman concerning the dividing of responsibility of NCDPC, number 2737/LSW., dated 30 June 2018.

6. The Potentials and The Preparedness In All Aspects

For the potential and the needs in different aspects determined in this plan, it summarizes tasks, potentials and needs to respond to the disaster incidents. It includes potentials and readiness of concerned sectors as shown in the following table:

No	Sectors	Potentials/Resources	Keeping venue	People in charge/Coordinators
1	Ministry of Labor and Social Welfare (MLSW)	<ul style="list-style-type: none"> - The 2019 budget for aid amounted to 300,000,000 Kips; - The petrol fund can only be used for buying petrol for vehicles, equipment, etc. in response to the emergency incidents in 2019. The available fund is 1,000,000,000 Kips; - ASEAN+3 rice reserve. 500 Tons of rice are stored there. Lao PDR is the host for such storing. - Equipment namely: wood nails, nails for tin roof, house appliances, more than 800 tents as 	<ul style="list-style-type: none"> - In the national treasury - In the national treasury (Already approved by the National Assembly) - Km-17 Warehouse, MLSW - Km-17 Warehouse, MLSW 	<ul style="list-style-type: none"> - Division of Aid and Development - Division of Aid and Development and WFP

		<p>shelters, 4 vehicles for transportation, 2 water-tank trucks, 9 generators (for lighting), 60 life jackets, 7 rescue boats, 42 plastic boats without motors, 4 pick-up cars.</p> <p>- The emergency evaluation team collected the information and evaluated the urgent need in the areas affected by the disaster so that the aid can be provided in a timely manner.</p>		
2	Ministry of Finance	<ol style="list-style-type: none"> 1. Government's accumulation treasury: 756 Billion Kips; 2. Milled rice (Lao government's ASEAN+3 Rice Reserve for Emergency): 2,221.40 Tons; 3. Milled sticky-rice: 1,738 Tons; 4. Government's Petrol Accumulation: 10 million Liters (8 million Liters for Diesel and 2 million Liters for gasoline) 5. Government's Reserve 	<ol style="list-style-type: none"> 1. National Treasury; 2. Milled rice in Vientiane capital; 3. Milled sticky rice in Champasak Province; 4. Petrol is accumulated in Vientiane capital, Champasak and Attapeu Provinces. 	<ul style="list-style-type: none"> - The government's Accumulation Treasury is managed by the Department of Government Accumulation; - Government's Reserve is managed by The Department of Government Budget
3	Ministry of Health	<ol style="list-style-type: none"> 1. Emergency medical team: <ul style="list-style-type: none"> - National Hospitals (Mahosot Hospital, Mittaphap Hospital, Setthathilat Hospital, Maternal and Neonatal Hospital, Child Hospital); - Provincial Hospitals in 17 provinces 	Ministry of Health	-

		<p>throughout the country;</p> <ul style="list-style-type: none"> - District Hospitals throughout the country; - Health centers throughout the country; - Private sector: Private hospitals and medical clinics (No action yet in collaboration with NCDPC, Ministry of Health) <p>2. Medicines and medical equipment:</p> <ul style="list-style-type: none"> - Get ready in terms of medicines by transferring some money to reserve in Number 2 and 3 medicine processing factories. <p>3. Warehouse system (Logistic):</p> <ul style="list-style-type: none"> - There are 2 kinds of warehouses: the provincial food and medicine warehouse and the provincial hospital. - Food and medicine warehouses are in 17 provinces; - Hospital warehouses are in 17 provinces. - There are 4 hospitals in the national levels. - Xiengda warehouse is the central level (Vientiane capital) - There are 2 warehouses of quartermaster covering 4 provinces in 2 parts: The Northern part covers Oudomxai and Luangprabang whereas the Southern part covers Savannakhet and Champasak. <p>4. Vehicles:</p>		
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		<ul style="list-style-type: none"> - There are 03 advance ambulances (2 of them are stationed at the Cabinet Office of Ministry of Health whereas 1 ambulance is handed over to Sekong Provincial Office of Public Health) - There are 17 basic ambulances which are stationed at 17 Provincial Offices of Public Health; - There are 6 cars installed with water filters; - There are 20 clean drinking-water trucks; 		
4	Ministry of Security	<p>Force:</p> <ul style="list-style-type: none"> - There are 2,000 officers as reserve forces in the national level; - There are 619 officers in the Provincial Security Force; - There are 80 officers in the District Security Force; <p>Vehicles and equipment in the national level:</p> <ul style="list-style-type: none"> - 1 Patrolling boat - 15 trucks - 06 rescue boats - 15 fire engines - 03 rescue cars - 02 generators - 02 chainsaws - 06 police dogs - 02 ambulances <p>Savannakhet Provincial Security Headquarter</p> <ul style="list-style-type: none"> - 02 Fire engines - 01 Rescue car - 02 Rescue boats - 04 Trucks - 13 Pick-up cars - 02 Motorbikes 	Ministry of Security	-

		<ul style="list-style-type: none"> - 01 Generator - 50 tents - 218 beds - 15 communication devices 		
5	Ministry of National Defense	<p>1. Organization, the use of force</p> <ul style="list-style-type: none"> - To fulfil the roles and duties of Ministry of National Defense, the local military forces were used during the disaster incident in collaboration with the security force, local authorities and different sectors that came to support and solve the emergency incidents without waiting for the order from the higher level. In case, the serious disaster continued to occur so that the local authorities could not respond to such incident, the General Assistant Department would organize the forces from different departments from the ministry to go down and support. - Organize the forces from different departments and divisions and the technical team to get ready to perform their duties according to the order from the Ministry. <p>2. Organizing and supervising along the vertical level.</p> <ul style="list-style-type: none"> - Ministry level: The Director General of General Assistant Department supervised the overall works throughout the country under the direction of Minister of 		-

		<p>Ministry of National Defense.</p> <ul style="list-style-type: none"> - Division level; The General Battalion: is directly supervised by the Director of Division and the Head of General. - Provincial Military Headquarter: is directly supervised by the Director of Provincial Military Headquarter - Supervision center: - Supervision center under the Ministry: at Phonkheng for supervising throughout the country. - Field supervision center: is to supervise the force that work in the disaster areas. <p>3. Security task:</p> <ul style="list-style-type: none"> - Department of Quartermaster Assistance, and Department of Technical Assistance are the central for working on security for the Ministry. - The Ministry's coordinators are the assistant to help collaborate with different sectors in the central and local levels. <p>4. Vehicles and equipment:</p> <ul style="list-style-type: none"> - 9 Patrolling boats with hauling wheels; - 39 rescue boats (23 flat boats, 10 air pumped boats, 2 off-road boats); - 5 sets of rescue equipment; - 1 pick-up car; 		
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		<ul style="list-style-type: none"> - 1 set of walkie-talkies (1 Transmitter, 30 receivers) - 1 rescue car installed with complete equipment; - 1 ambulance installed with complete equipment; - Delivery car (Depending on the need); - Helicopters (Depending on the need); - Airplanes (Depending on the need); - 02 water-filtering cars; - 02 water-delivery cars; - 2 sets of chemical disposals. 		
6	Ministry of Agriculture and Forestry	<ul style="list-style-type: none"> - 7 cars installed with water pumps; - 30 water pumps with 65 horse power each and come with rollers; - 60 water pumps with 5 horse power each; - Collaborate with sectors and local administrative authorities to get ready to respond to the climate change which happens more frequently and threatens the production especially the outbreak of masses of grasshoppers in Northern provinces. - At the same time, prepare to prevent from seasonal animal disease and pay attention to surveillance and monitoring of drought and flooding so that it can be ready to report with the aim to solve problems on time; - Develop the system of weather forecasting where the climate 		-

		<p>could affect the agricultural and forestry production. It means that it is the way to convert to modern weather forecast.</p> <p>- Focus on implementing the irrigation-related measure in the future:</p> <ol style="list-style-type: none"> (1) Deliver the mobile water-pumps with 57 horse power to water the project's rice paddy fields where the irrigation system is cut off and the water cannot flow into the production areas. (2) Use the black pipe HDPE and the plastic pipes PVC to connect at the point where the irrigation system is cut off so that it can water the areas. (3) Focus on the restoration and fixing of damaged irrigation system namely: barrage systems, overflow weirs, water pumps, reservoirs, the existing sluice gates, and the point where there are no sluice gates. The aim is to survey, design and build the new ones at unsecured hotspots to prevent from the flood over the production areas of farmers; (4) Conduct the study of hotspot areas where it is risky to have disaster so that it can set a measure to prevent and mitigate the possible 		
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		<p>impacts especially in the provinces with 7 plain areas, the plain area in the central part, and small plains where the flood often occurs, flash flood and soil erosion.</p> <p>(5) Recheck the damaged sluice gates and remove them so that they can be used and prevent from the possible disaster. At the same time, it needs to plan to build the sluice gates and dams to prevent from the flood at the point where it is seen as a hotspot. This is to protect the production areas and the living areas of people of all ethnic groups throughout the country after the water go down.</p> <p>(6) For the management of water, it will collaborate with the Ministry of Energy and Minerals and the sectors that are responsible for hydro power dams in the whole country in collecting information on the management of water, the releasing of water from the reservoir, the storing of water in the wet season. Such information, it can give an alert to the irrigation sector so that it can prepare and get ready to</p>		
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		<p>respond and prevent the agricultural production areas from the flood. Additionally, it also collaborates with different dams where irrigation projects use the water from downstream below the power house (below the dams) to plan to release water from the dam and supply water to the production area in the dry season.</p>		
7	Ministry of Public Work and Transportation	<ul style="list-style-type: none"> - There are people in charge in each part of road including: technical staff who repair the national highway, technical staff from Provincial or Vientiane Capital Office of Civil Work and Transportation and District Office of Civil Work and Transportation; - There are companies responsible for road repairing which have vehicles and equipment to monitor and solve the urgent problems that may happen in each part of road. This is to make sure that the traffic along the national and local highway is running smoothly; - Collaborate with the Department of Mechanics under the Ministry of National Defense in case of necessity to get their support for temporary when the road and bridges are cut off. 		-

		<ul style="list-style-type: none"> - The order of Minister of Ministry of Civil Work and Transportation concerning the monitoring, solution and inspection of urgent works along the highways throughout the country in the wet season, 2019. <p>Vehicles and equipment:</p> <ul style="list-style-type: none"> - 1 long Hauling lorry; - 10 mini excavators; - 6 crane trucks. 		
	Lao RED Cross	<p>Personnel:</p> <ul style="list-style-type: none"> - 45 staff supporting the relief; - 100 volunteers from 5 Secondary schools; - 40 staff and 150 volunteers working on community health promotion; - 88 volunteers working on the rescue along the road; - 150 staff and 200 volunteers are responsible for the blood donation and make sure that the donation is safe, and the blood is enough; <p>Vehicles and equipment:</p> <ul style="list-style-type: none"> - 50 tents (Size: 4 x 6 m); - 4 trucks; - 2 boats; - 4 sets of water filter (Production capacity is 700/h/set); - 6 rescue cars; - 500 sets of commodities for the relief; - 500 bags of clothes, food stuff, blankets and mosquito nets from the national level and warehouses; - There is 80,000,000 Kip in the reserve 		-

		budget for emergency;		
	Lao Women's Union	<ul style="list-style-type: none"> - It has potentials to coordinate within the areas that can access to the target group. It can provide the activities to rehabilitate the mental health of target groups. It provides the knowledge on health education, how to recover and develop the economy in the beginning by giving instruction and the way to create jobs namely: beauticians, tailor, women health care and child nutrition care depending on the appropriateness. - Friendship houses for women and children who are affected by disaster and the use of violence at Dongbark and Haryao centers, Sanamxai District, Attapeu Province. 		-
	Lao People's Revolutionary Youth Union	<ul style="list-style-type: none"> ➢ Personnel - There is a committee responsible for the prevention and control of disaster at the National Lao Youth Union consisting of 3 people and 6 secretariats; - There is 18 focal points at the department level of National Lao Youth; - There is a committee responsible for the focal points who coordinate about the prevention and control of disaster in 18 ministries, 21 organizations and 18 provinces. There are 3 people in each focal point so in total, there are 161 people; 		-

		<ul style="list-style-type: none"> - There are volunteer divisions in 18 provinces throughout the country. There are totally 142 divisions with the total member of 4,260 people. <ul style="list-style-type: none"> ➤ Vehicles and equipment: - There are stuff remaining in the warehouse which are valued 297,619,000 Kip; - Now, the money being raised is 19,510,500 Kip remaining. 		
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PART III. IMPLEMENTATION MEASURES

1. The committee for disaster prevention and control of each level must closely collaborate with different sectors in the national and local levels throughout the country. It needs to have ownership in identifying and clearly planning for each task so that it can reduce the disaster risk, get ready and respond to the incident in a timely manner;
2. Each sector is assigned to make a clear readiness plan to cope and respond to the disaster for its own so that it can support the response to the emergency incident in timely and high efficient maners.
3. The secretariat of NCDPC is the focal point for collaborating with concerned sectors and monitor the implementation of the plan of each sector and then report the outcome from implementation to the higher levels in different time periods;
4. Once receiving the direction from the higher level, it should mobilize the aid from international organizations and friendship countries.

THE MINISTER

**The President of National Committee for
Disaster Prevention and Control (NCDPC)**

(Signature and Seal)

Dr. Khamphaeng XAISOMPHAENG