



# PERFORMANCE EVALUATION REPORT IN QUANG NGAI PROVINCE

**Project Title: Strengthening the capacity of officials on Integrated Flood Management Plans (IFMP): Integrating IFMP into provincial disaster prevention plans in coastal provinces of Central Vietnam**



Quang Ngai, 2023

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**Project Title: Strengthening the capacity of officials on Integrated Flood Management Plans (IFMP): Integrating IFMP into provincial disaster prevention plans in coastal provinces of Central Vietnam**

## **Project Leader**

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**Quang Ngai, 2023**

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## Abbreviation

APN	Asia-Pacific Network for Global Change Research
MARD	Ministry of Agriculture and Rural Development
VNU	Viet Nam National University
CEFD	Center for Environmental Fluid Dynamics
IFMP	Integrated Flood Management Plans

## Preface

In Vietnam, under the effect of climate change, natural disasters, especially storms and floods, cause more and more damage. Although Vietnam has been active in flood management, these measures are mainly localized, fragmented, unsystematic or short-term, and may cause more severe flooding to nearby areas. Therefore, there is a need for a different approach. IFMP is an integrated management with the aims to maximize the benefits of floodplains and minimize flood damage with a watershed and multisectoral approach. Recognizing the necessity of IFMP, Center for Environmental Fluid Dynamics, VNU University of Science, Vietnam National University organized training for officials with an aim to enhancing efforts in providing support to the officials through tailored research activities; enhancing efforts in providing capacity development to the officials that meet their specific needs by organizing training; and creating holistic and transdisciplinary capacity development activities on IFMP.

The training for local officials of agencies such as: Provincial Steering Committee for Disaster Prevention and Search and Rescue, District Steering Committee for Disaster Prevention and Search and Rescue and other relevant departments and agencies. The presentations received attentions and appreciation as well as the fruitful comments of the experts and representatives from local agencies. Based on the comments raised at the training, Center for Environmental Fluid Dynamics (CEFD) will, in collaboration with the experts, finalize the report and manuals. The training was successfully organized on April 2023 in Quang Ngai, Viet Nam.

Taking this opportunity, Center for Environmental Fluid Dynamics would like to express sincere thanks to APN for their generous support and to all participants for their active and constructive comments to the training.

## Photographs from the training

### 1 - Opening remarks



Dr. Le Minh Nhat, Representative Office of Viet Nam Disaster and Dyke Management Authority in Central and Central Highlands Regions, MARD, makes the welcome speech

### 2 - Presentations at Training



Dr. Le Minh Nhat, MONRE, presents *Developing/updating IFMP*



Assoc.Prof Tran Ngoc Anh, CEFD, presents *Integrating IFMP into the provincial disaster management plan*

### 3 - Discussion at the Training



Mrs. Pham Thi Kim Van, Department of Planning and Investment



Mr. Nguyen Hoang Quoc Uy, Department of Finance





Mr. Le Viet Binh, Steering Committee for Disaster Prevention and Search and Rescue of Quang Ngai Province



Mrs. Dang Thi My Hanh, Division of Agriculture and Rural Development of Binh Son District

**4 - Performance evaluation**



Trainees did the pre-training interview



Trainees did the post-training interview

## Organization of the training

### Objectives

- (i) Share the knowledge-base of IFMP and how to develop IFMP,
- (ii) Guidance on integrating IFMP into the provincial disaster management plan

### Date of training

19 and 20 April 2023

### Venue

Song Tra hotel,  
No.2 Quang Trung, Le Hong Phong Ward, Quang Ngai City, Quang Ngai, Viet Nam.

### Organizer

Center for Environmental Fluid Dynamics (CEFD), VNU University of Science,  
Vietnam National University.

### Supported by

Asia-Pacific Network for global Change Research (APN).



# PART 1. BRIEF INFORMATION ABOUT THE TRAINING

## 1. Introduction

With the desire to enhance the capacity of local officials in developing IFMP and contribute to reducing flood damage in the province, the consultant has organized a two-day training course with two main parts:

- Guidance on developing and updating IFMP;
- Guidance on integrating IFMP into the provincial disaster management plan.

A training for local officials of agencies: Provincial Steering Committee for Disaster Prevention and Search and Rescue, District Steering Committee for Disaster Prevention and Search and Rescue and other relevant departments and agencies was held at Song Tra hotel in Quang Ngai on 19 and 20 April 2023. It was organized by CEFD in collaboration with related agencies.

## 2. Objectives of the training

The general objective of the training was to strengthening the capacity of provincial authorities/organizations and disaster prevention agencies in developing IFMP and integrating it into provincial disaster prevention and control plan.

The specific objectives of the training were to:

- (iii) Share the knowledge-base of IFMP and how to develop IFMP,
- (iv) Guidance on integrating IFMP into the provincial disaster management plan

## 3. Training Participants

The training was attended by representatives from the following organizations:

- Dr. Le Minh Nhat, Head of the Representative Office of Viet Nam Disaster and Dyke Management Authority in Central and Central Highlands Regions.
- Representatives of CEFD consultant: Assoc. Prof. Tran Ngoc Anh - Project leader, MSc. Dang Dinh Duc, Dr. Nguyen Quoc Son, MSc. Pham Thi Tuyet May, Ms. Nguyen Hong Thuy.
- Representatives of Steering Committee for Disaster Prevention and Search and Rescue of Quang Ngai Province: Mr. Bui Duc Thai, Deputy Chief of the Office.
- Representatives from various departments: Department of Natural Resources and Environment, Department of Planning and Investment, Department of Finance, Department of Transportation.
- Representative of Quang Ngai Provincial Hydro-Meteorological Station.
- Representatives of Steering Committee for Disaster Prevention and Search and Rescue of districts, towns, and cities: Binh Son, Son Tinh, Tu Nghia, Nghia Hanh.

#### 4. Conduct of the training

The training was opened by Dr. Le Minh Nhat, Head of the Representative Office of Viet Nam Disaster and Dyke Management Authority in Central and Central Highlands Regions, MONRE. He warmly welcomed all participants to the training and provided some background information on the project and emphasized the objectives of the training. The consultant also pointed out that the important of developing IFMP in context of climate change and he hopes that through this training course, the participants will have a better understanding of the significance, objectives, and process of developing IFMP.

In the first presentation, Dr. Le Minh Nhat gave brief introduction on the definitions of IFMP and the steps of developing/updating the IFMP. Subsequently, he presented in detail the specific steps of implementation, each of which was accompanied by illustrative examples to enable the participants to grasp the precise purpose, input, and output of each step. Specific key contents addressed in this presentation include:

- Definition, objectives of IFMP;
- Difference between traditional flood management and IFMP;
- Comparison between old version and new version of IFMP manuals;
- The steps of developing/updating the IFMP and detailed contents in each step;

In the second presentation, Assoc.Prof Tran Ngoc Anh presented the importance of integrating the IFMP into the disaster prevention plans, the steps involved, and provided illustrative examples for each step. Specific key contents addressed in this presentation include:

- Responsibilities and tasks of integration implementation;
- Content that needs to be integrated;
- The steps of integrating the IFMP into the disaster prevention plans.

In the discussion: At the end of the training course in the morning, the trainers raised several questions related to the training topics to see if the trainees were understood the lectures. In this section, we also want to know how the issues mentioned in the lecture were applied in local specific contexts. This section also allows participants to ask any questions they have and the trainers answer or respond those questions. The province of Quang Ngai has advantages in terms of mechanisms and policies when it comes to implementing the Integrated Flood Management Plan (IFMP) as one of the tasks in disaster prevention and control. In addition, the major rivers in the province are all intra-provincial rivers, making it easy to collect data. However, despite these advantages, the province also faces many challenges. Currently, Quang Ngai province has not yet developed IFMP for the river basins in the province, thus lacking experience in IFMP development. Furthermore, the province also faces difficulties in allocating funds for implementation. The concept of IFMP is new to the locality, and the approach and methods are also new, therefore requiring more time for research and implementation.

Finally, Dr. Le Minh Nhat briefly summarized what had been discussed during the training, and thanked all participants for their participation, especially those who contributed to the presentations and discussions.

After finishing the discussion, representatives of Viet Nam Disaster and Dyke Management Authority, representatives of the Steering Committee for Disaster Prevention and Control, Search and Rescue of Quang Ngai province, the Consultant and delegates come to an agreement on the following:

- Integrated flood management is a new approach that does not limit the spatial extent of the river basin. The implementation of measures for flood control in integrated flood management avoids overlap, considers coordination among stakeholders, and fully incorporates land use issues, economic, social and environmental sustainable development, disaster risk management in flood plains. The Integrated Flood Management Plan is very important and necessary, but the province has not yet developed it. Through the training, it is hoped that the locality can actively developing IFMP for local river basins.
- Integrating IFMP into provincial disaster prevention plans is still a new concept for the locality. The integration of the IFMP into the disaster preparedness plan is essential to avoid overlap in proposed measures. Each locality has the characteristics of different types of natural disasters, so in the integration process, it is necessary to consider the impact of floods and other types of disasters to arrange measures in order of priority.

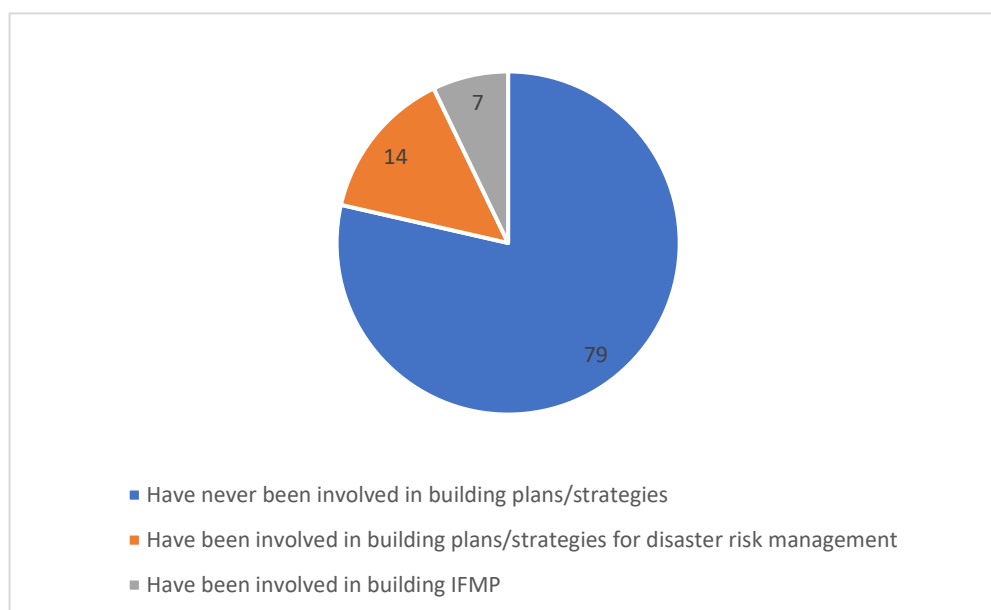
## PART 2. PERFORMANCE EVALUATION

The consultant has developed pre-training and post-training interview questionnaires to assess the effectiveness of the training in enhancing the capacity of the participants (details of the questionnaire can be found in Annex). The evaluation focuses on the following contents:

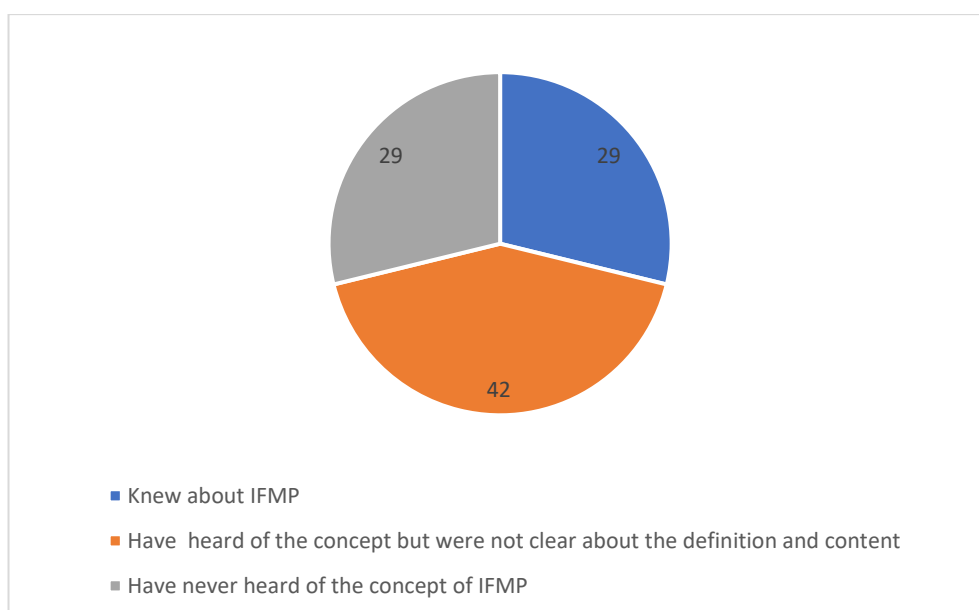
- Trainees' desires and expectations before attending the training;
- Trainees' understanding of IFMP, integrating IFMP into provincial disaster prevention plans;
- Difficulties encountered during the implementation according to the manuals;
- The suitability of the manuals for local implementation;
- The need for further study of related to flood risk.

### 1. Pre-training interview results

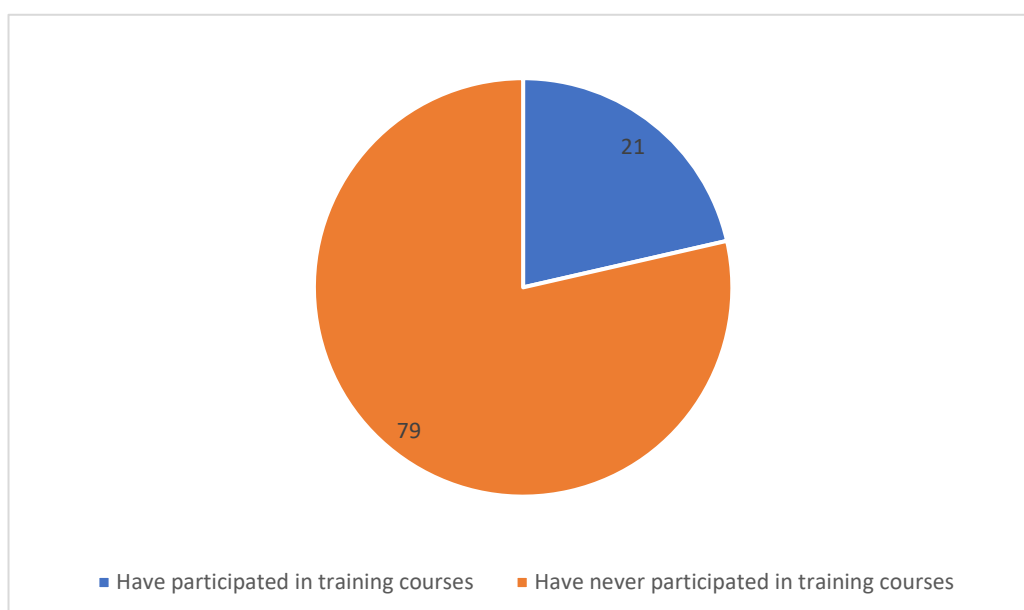
Regarding participation in building plans/strategies for disaster risk management and IFMP: 79% of respondents have never been involved in building these plans, 14% have been involved in building plans/strategies for disaster risk management, and only 7% have been involved in building IFMP.



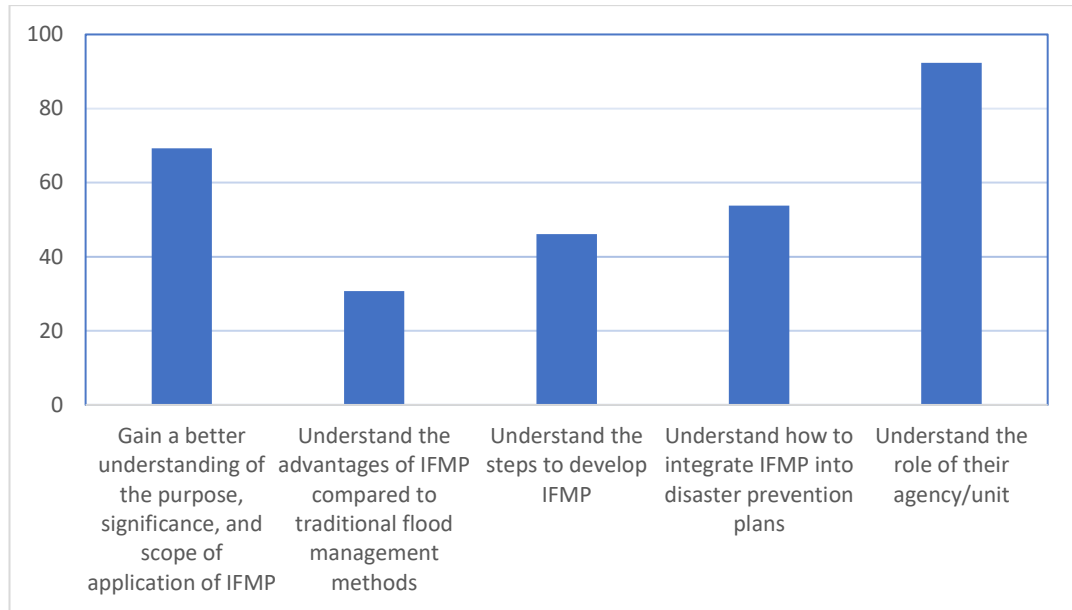
Regarding the concept of IFMP: 29% of respondents knew about IFMP, 42% have heard of the concept but were not clear about the definition and content, and 29% have never heard of the concept of IFMP. Those who had some knowledge about IFMP were aware of its role in forecasting, warning, and proactive disaster risk management to minimize negative impacts and reduce flood damage.



Regarding participation in training course on natural disaster risk management and IFMP development: 21% of respondents have participated in training course, while 79% have not. The training course that they have participated in were primarily organized by the Provincial Steering Committee for Disaster Prevention and Control, Search and Rescue, the Red Cross Society, and community-based natural disaster risk management training course.



Regarding participants' expectations when attending the training workshop: 69% of them expect to gain a better understanding of the purpose, significance, and scope of application of IFMP, 31% of them want to understand the advantages of IFMP compared to traditional flood management methods, 46% of them want to understand the steps to develop IFMP, 54% of them want to understand how to integrate IFMP into disaster prevention plans, and 92% of them want to understand the role of their agency/unit in building IFMP and integrating it into their disaster prevention plans.



The pre-interview results show that the concept of IFMP is still new to the trainees and they do not have much in-depth knowledge about natural disaster risk management in general and comprehensive flood management in particular. Therefore, conducting training course is essential to enhance the capacity of local officials in building IFMP and integrating it into the provincial disaster prevention plans, contributing to reducing the damages caused by floods.

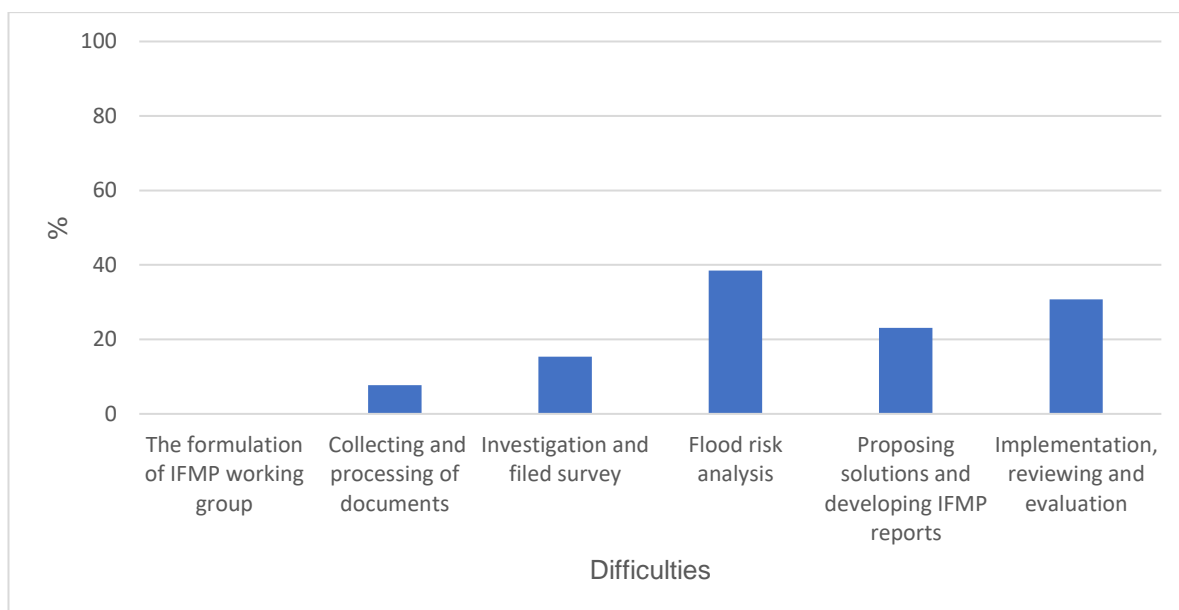
## 2. Post-training interview results

Regarding the IFMP development, 85% trainees answered correctly about the IFMP concept, 62% trainees believed that IFMP development to be very necessary and 31% trainees believed that IFMP development is necessary and should be done; 7% trainees believed that IFMP development is necessary but priorities should be given to other types of natural disasters that pose greater risks in the locality.

Regarding integrating IFMP into provincial disaster prevention plans, 92% trainees answered correctly about the concept of integration;

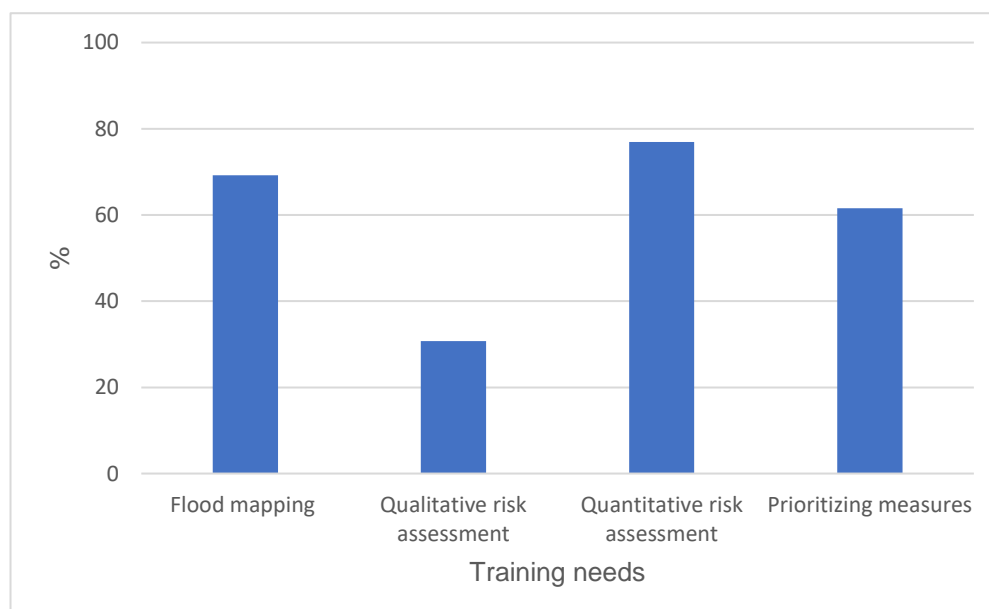
Regarding the 6 steps of developing IFMP, 8% trainees said that they encounter difficulties in collecting and processing of documents, 15% are difficulties in conducting field investigations and filed surveys, 38% are difficulties in analyzing flood risk, 23% are difficulties in proposing measures and developing IFMP reports, and 31% are difficulties in implementation, reviewing, and evaluation. These difficulties mainly stem from a lack of machinery and equipment to conduct surveys, the lack of human resources to implement the plan, the lack of experience of local officials in building IFMP, and insufficient funding from the local government to implement measures.





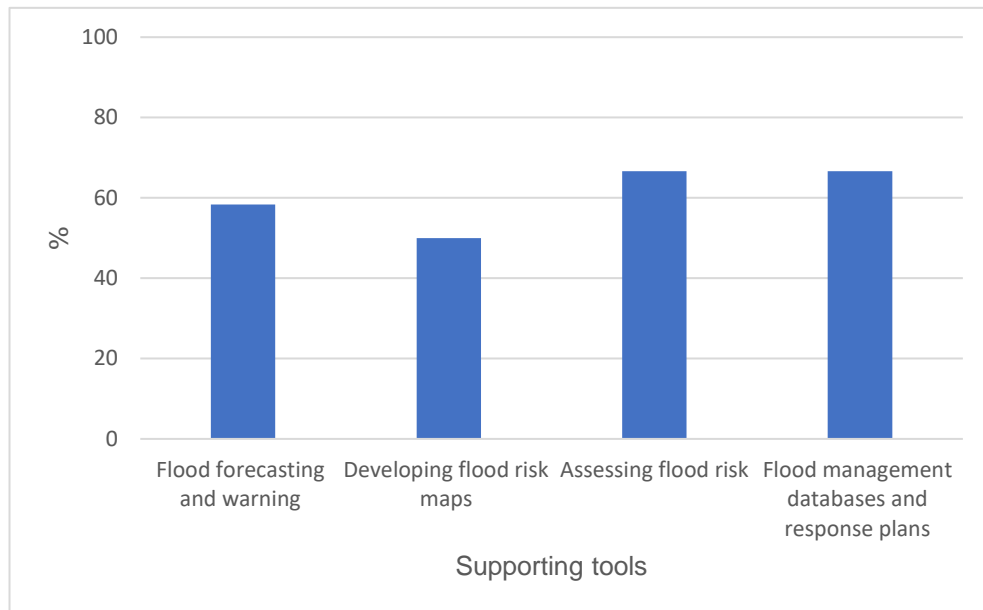
At the end of the training course, 100% trainees evaluated the manual of developing IFMP as appropriate to the actual situation in the locality, and similarly, 100% trainees evaluated the manual of integrating IFMP into the provincial disaster prevention plans as appropriate;

In addition to the content delivered in the training course, the trainees also expressed a desire to attend more in-depth training on topics such as flood mapping (69%), qualitative (31%) and quantitative (77%) risk assessment, and methods for prioritizing measures (62%). Among the trainees, there were those who expressed a need to participate in one or more different topics.



Regarding flood management at the local level, the trainees believed that in addition to developing IFMPs, localities need tools to support calculation and data management to help them make timely decisions and propose appropriate measures for the flood situation, such as flood forecasting and warning tools (58%), tools for developing flood risk maps (50%), tools

for assessing flood risk according to various calculated scenarios (67%), flood management databases and response plans (67%).



The pre-interview results show that the training workshop provided basic knowledge to the trainees about the concept and the process of developing an IFMP and integrating it into the provincial disaster prevention plans (compared to only 29% of trainees who knew about IFMP before the training). In addition, the manuals received positive feedback from trainees about their clear presentation, strict implementation steps, and their relevance to the local reality. According to the trainees, the implementation contents require in-depth knowledge of floods, inundation, flood risk, and proposing measures. Therefore, trainees expressed a desire to participate in more in-depth training course on these topics and the locality can develop supporting tools to serve the flood response and risk reduction efforts.

## CONCLUSION AND SUGGESTION

Along with the efforts of the consultation in developing manuals, training materials, organizing training, the support of APN, Viet Nam Disaster and Dyke Management Authority, and the enthusiastic participation of the locality, the training course has achieved the objectives in the project's ToR. The training results not only provide information to enhance the trainees' understanding of IFPM and integrating IFMP into the provincial disaster prevention plans but also stimulate the desire to learn more about flood management-related content, developing support tools, and the coordination between departments/agencies in developing IFMP.

Suggestion: Although the training course was organized for 3 days, the concept of IFMP has a significant knowledge load, and many local officials are not aware of it. Therefore, to understand each content in detail, more in-depth training course are needed so that the locality can proactively build IFMP for river basins in the province.

# ANNEX

## Annex 1. Pre-training interview questionnaire



VIETNAM NATIONAL UNIVERSITY  
 VNU UNIVERSITY OF SCIENCES  
 CENTER FOR ENVIRONMENTAL FLUID DYNAMICS



**Project “Strengthening the capacity of officials on Integrated Flood Management Plans (IFMP): Integrating IFMP into provincial disaster prevention plans in coastal provinces of Central Vietnam”**

### PRE-TRAINING INTERVIEW QUESTIONNAIRE

Full name: ..... Position: .....

Organization: ..... Province: .....

*Please select your answers for the following questions:*

**1. Have you ever participated in the development of a natural disaster risk management plan/strategy and IFMP?**

- Have never been involved in building plans/strategies;
- Have been involved in building plans/strategies for disaster risk management;
- Have been involved in building IFMP;

**Have you known about the concept of Integrated Flood Management (IFM)?**

- Knew about IFMP;
- Have heard of the concept but were not clear about the definition content;
- Have never heard of the concept of IFMP.

**If yes, please let us know how important the Integrated Flood Management (IFM) is for the disaster prevention works of your locality?**

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 .....

**3. Have you ever participated in training courses on natural disaster risk management and IFMP?**

- Yes  No

**If yes, please specify the names of the training courses that you have participated in?**

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**4. What information do you expect to gain from this training course?**

- Gain better understanding of the purpose, significance and application scope of IFMP;
- Understand the advantages of IFMP compared to traditional flood management methods;
- Understand the steps to develop IFMP;
- Understand how to integrate IFMP into disaster prevention plans;
- Understand the role of their department/agency.

Other: .....

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*Thank you!*

## Annex 2. Post-training interview questionnaire



VIETNAM NATIONAL UNIVERSITY  
VNU UNIVERSITY OF SCIENCES  
CENTRE FOR ENVIRONMENTAL FLUID DYNAMICS



### Project “Strengthening the capacity of officials on Integrated Flood Management Plans (IFMP): Integrating IFMP into provincial disaster prevention plans in coastal provinces of Central Vietnam”

## POST-TRAINING INTERVIEW QUESTIONNAIRE

Full name: ..... Position: .....

Organization: ..... Province: .....

*Please select your answer for the following questions:*

1. **Could you please indicate what is Integrated Flood Management? (Choose the most appropriate answer)**
  - The process of integrating land and water resource management to maximize the benefits of flood-prone delta regions and minimize the damages caused by floods;
  - The process of implementing pre-disaster measures to reduce the impacts of floods;
  - The process of search and rescue, and post-flood recovery;
  - The process of integrating water resource management to maximize the benefits of flood-prone delta regions and minimize the damages caused by floods.
  
2. **How important do you consider the need to develop IFMP for the locality?**
  - Essential;
  - Necessary and advisable to do;
  - Necessary but prioritize other types of natural disasters that pose higher risks in the locality;
  - Not necessary for the current flood situation in the locality.
  
3. **What is integrating IFMP into provincial disaster prevention plans?**
  - Integrating measures of construction (including prevention, mitigation, response, and post-disaster recovery stages) and non-construction measures (including prevention, mitigation, response, and post-disaster recovery stages) of the IFMP into the provincial disaster prevention plans;
  - Integrating flood response measures into the provincial disaster prevention plans;
  - Integrating flood prevention and mitigation measures of the IFMP into the provincial disaster prevention plans;
  - Integrating impact assessments of the IFMP into the provincial disaster prevention plans.



4. **Could you please indicate which step in the IFMP process you may encounter difficulties with? Specifically, what are the difficulties you have faced when implementing each of the 6 steps in the flood management plan?**

- The formulation of IFMP working group;
- Collecting and processing of documents;
- Investigation and filed survey;
- Flood risk analysis;
- Proposing solutions and developing IFMP reports;
- Implementation, reviewing and evaluation;

Specific challenges:

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5. **Can you please indicate whether the implementation steps outlined in the Guidelines for Developing Flood Management Plans are appropriate for the actual situation in your locality?**

- Appropriate  Not appropriate

**If not, in your opinion, what needs to be modified?**

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6. **Can you please indicate whether the implementation steps in the Integrated Flood Management Plan (IFMP) guidelines for incorporating the Disaster Risk Reduction (DRR) and Flood Management Plans (FMPs) into the Provincial Disaster Risk Management (DRM) plan are suitable for the actual situation in your locality?**

- Appropriate  Not appropriate

**If not, in your opinion, what needs to be modified?**

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7. **Would you like to receive further training on specific contents in the Comprehensive Flood Management Guide after completing the training course? If yes, please specify the contents you would like to learn in more detail, in order of priority (1, 2, 3, etc.).**

- Flood mapping;
- Qualitative risk assessment;

- Quantitative risk assessment;
- Prioritizing measures;
- Do not need;

Other: .....

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.....

**8. In your opinion, does local flood management work need supporting tools for calculation and data management? If yes, what kind of tools do you think are necessary?**

- Flood forecasting and warning;
- Developing flood risk maps;
- Assessing flood risk;
- Flood management databases and response plans;
- Do not need;

Other: .....

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*Thank you!*