

Reference code	
Date of submission	
(to be filled by NAFOSTED)	

## APPLICATION

### FOR BASIC RESEARCH PROJECT

#### A. General project information:

1	Project name			Study on Initiation Mechanisms and Hazard Assessment of Landslides for Safety Management Practices of Dams and Reservoirs: A case study of Van Hoi Reservoir		
2	Summary			Landslides in dam reservoir areas refer to slope failures into the water body, that occur on the upstream or vicinity of the reservoirs. Reservoir landslides often occur due to a significant impoundment or sudden drawdown of the reservoirs, precipitation, earthquake or any combination of these factors. Reservoir landslides not only pose serious threat to humans and infrastructure located around reservoirs, but it also can create the secondary hazards that include (1) upstream inundation due to river blockages; (2) dam overtopping by landslide-generated water waves; (3) dam breach and downstream flooding; (4) the reduction of storage capacity (Schuster 1979; Korup 2005). Recently, reservoir landslides pose great attention in regard to the increasing amount of dam infrastructure due to water resources and energy demand for economic development and human lives. The needs of hazard assessment of reservoir landslides become a pressing need for reservoir slope management, dam safety and disaster risk reduction. Although reservoir landslides and its consequential hazards often take place worldwide, mechanisms and combined effects of reservoir water level variation and rainfall on landslides have not fully examined. Taking a case study of Van Hoi reservoir in Binh Dinh province, this research proposal aims at the investigation of mechanisms and modeling of landslides and its secondary hazards by using physical tests, limit equilibrium stability analyses, and computer model.		
3	Field	Natural sciences and engineering <input checked="" type="checkbox"/> Social sciences and humanities <input type="checkbox"/>				
	Scientific field	Earth Science				
	Discipline's classification code	Environmental and natural hazard researches of Vietnam				
	Code of scientific field	105.08				
	Research type: Theoretical <input checked="" type="checkbox"/> ; Experimental <input type="checkbox"/>	Discovery proposal <input checked="" type="checkbox"/> ; Follow-on proposal <input type="checkbox"/>				
4	Project duration (months)	36	Number of project members	6		
5	Total budget required (mil. VND)	1,072	Requested funding (mil VNĐ)	1,072		
	Name of other funding institution/s this proposal has been submitted to (if any)					

#### B. Principal Investigator (PI) and Host Institution:

1	<b>Principal Investigator</b>			
	Full name	Phạm Văn Tiền	Year of birth	15/06/1988
	Academic title	Dr	Sex	M
	Administrative position	Researcher	ID Number	151728836
	Department			
	Institution	Institute of Geotechnology and Environment		
	Address	Số 26, ngõ 82 phố Trần Cung, phường Nghĩa Tân, quận Cầu Giấy, Hà Nội	City/prov.	Hà Nội
	Telephone	84-024-62651379	Cell phone	84-0971998715
	E-mail	phamtiengvt@gmail.com	Fax	

2	<b>Host Institution</b>			
	Name	Institute of Geotechnology and Environment		
	Representative	PGS. TS Đỗ Đình Toát	Position	Viện trưởng
	Address	Số 26, ngõ 82 phố Trần Cung, phường Nghĩa Tân, quận Cầu Giấy	City/prov.	Hà Nội
	Account number	3713.0.908.9600	State Treasury	Quận Cầu Giấy
	Infrastructure available for the project	The geotechnical laboratories of the Institute of Geotechnology and Environment and the collaborating research institutions are equipped with all of the equipment for this research. Computer systems with professional softwares are available for analyzing test results and running numerical models.		
3	<b>Collaborating Research Institution</b>			
	Name	International Consortium on Landslides, Kyoto University, Institute of Transport Science and Technology		
	Address	Kyoto - Japan and Hanoi - Vietnam	City/Prov.	Kyoto
	Country			

### C. List of members

No	Full name	Title	Research Institution	Position	Working month	Code
1	Phạm Văn Tiền	Dr	Institute of Geotechnology and Environment	PI	15.9	20259
2	Đỗ Minh Ngọc	M.PhD student	Institute of Geotechnology and Environment	Technician	8.8	6127
3	Trần Thanh Nhân	Dr	Hue University of Sciences - Hue University	Main researcher	6.8	8152
4	Nguyễn Quốc Phi	Dr	Hanoi University of Mining and Geology	Main researcher	7.3	3580
5	Đinh Thị Quỳnh	M	Institute of geotechnology and environment	Main researcher	8.8	20929
6	Nguyễn Châu Lân	Dr	University of Transport and Communications	Sci. Secretary	7.9	12801

### D. Expected Outputs

No	Publication results	Number of publications and articles	Note
1	Article(s) in qualified ISI-covered Journals ( <i>The leading journals in different disciplines, selected from list of Article(s) in qualified International Scientific Journals which is promulgated by NAFOSTED annually</i> )	1	Dự kiến đăng trên tạp chí Landslides (bao gồm Kết quả 2 và Kết quả 3)

2	Article(s) in qualified International Scientific Journals (The selected journals from the SCI and SCIE list, which is promulgated by NAFOSTED annually)	1	Dự kiến đăng trên tạp chí Natural Hazards and Earth System Sciences (Kết quả 1)
3	Article(s) in other International Journals	0	
4	Article(s) in National Scientific Journals	1	
5	National/ International Conference (s)	2	
6	Monograph(s)	0	
7	Other		

No	Training results	Number of participating Master and PhD Students	Note
1	Master(s)	1	Đại học khoa học tự nhiên - Đại học Quốc Gia Hà Nội
2	PhD(s)	0	

**E. Expenditure**

Fully allocated expenditure

Allocated expenditure partially

**F. Center of excellence** Yes  No

This main applicant confirms hereby the veracity of all the details and information given in this proposal including the attachments. They were prepared with the agreement of all parties involved.

**Host Institution**

Hà Nội, Date: 03/07/2019

**Principal Investigator**

**Phạm Văn Tiền**