

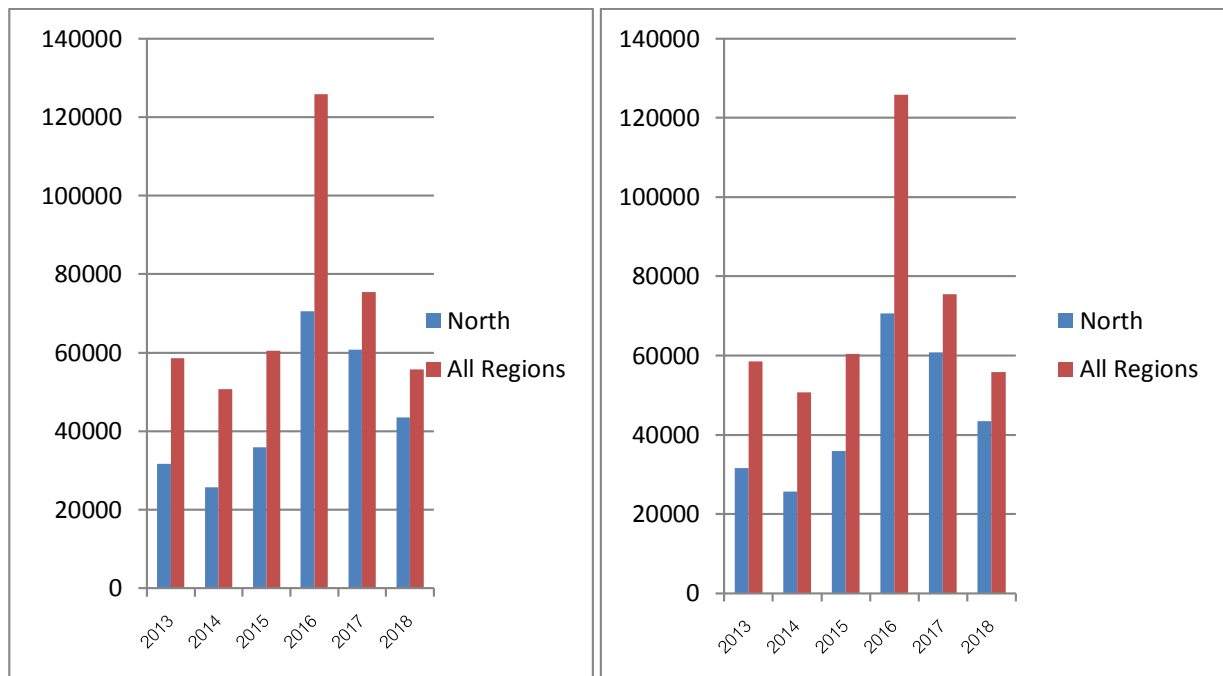
Nomination Questions for UNPSA 2021

Initiative Title: Institutional Preparedness in Response to Wildfire Crisis

1. Objective of the initiative

Wildfire, a major problem for Thailand, is caused by forest invasion and the lack of preparedness, aggravating the severity and compromising food security. Statistics from 2013 to 2018 show that the northern region had the highest incidents of wildfire suppression and burnt areas in the country.

Figure 1: Incidents of wildfire suppression Figure 2: Burnt areas



Source: Forest Fire Control Office, Department of National Parks, Wildlife and Plant Conservation

Thus, preparing for the wildfire crisis has become a challenge for Mae Phrik SAO. All community members and network parties to engage in wildfire prevention via the dashboard technology. This initiative has three objectives as follows:

(1) to encourage engagement from all community members in increasing forest areas, halting deforestation and to grant the community the access to the Forest Geographic Information System (FGIS) and local wisdom-based forest conservation and revitalisation (SDG 15.2),

(2) to promote forest areas as the source of food sustainability for the community, combat poverty, utilise the zoning management system, grant equal access to forest areas for all and ensure sustainable forest incomes (SDG 2.5), and

(3) to prepare all community members for the occurrence of wildfire by employing the technology 'Watchout Dashboard' for notification and identification of risk areas, the MIS and the GIS that are responsive, allowing for swift and effective control of wildfire crisis (SDG1.5).

2.Alignment with the Selected Category

This initiative is in alignment with the fourth category, as it strives to improve technological service provision, which would allow all community members to access technologies such as the Dashboard, GIS and MIS via smartphones. All parties become prepared to respond and handle the wildfire crisis in a swift and effective manner, leading to food security, sustainable incomes and local wisdom-based forest conservation and revitalisation.

3.Alignment with the 2030 Agenda

A. Please specify which SDGs and target(s) the initiative supports and describe concretely how the initiative has contributed to their implementation.

(1) In alignment with SDG 15.2, this initiative aims to protect and restore the forests by encouraging local wisdom-based participatory forest management, halting deforestation, and employing the MIS to analyse and plan sustainable forest management that is based on the community's need.

(2) In alignment with SDG 2.5, this initiative aims to eliminate famine by enriching biodiversity, and thus the forests become a sustainable source of food security and everyone has a fair share of the benefits. Also, utilising food zoning technology and GIS, along with training provision, would induce an increase in forest incomes and a decrease in deforestation activities among individuals affected by poverty.

(3) In alignment with SDG 1.5, this initiative aims to eliminate poverty by equipping the community members with the skills in adaption in the event of wildfire, MIS and GIS utilisation to drive the wildfire incident action plan.

B. Please describe what makes the initiative sustainable in social, economic and environmental terms.

(1) The preparedness policy that prompts the establishment of the wildfire operation centre and engagement in the incident action plan via the MIS and GIS has placed the community members as the core actors contributing to social sustainability.

(2) The GIS promotes income generation without deforestation, resulting in economic sustainability.

(3) The GIS-based forest zoning technology is devised in areas at risk of wildfire to create food security and environmental sustainability.

4. Relevance to leaving no one behind

A. Please explain how the initiative has addressed a significant shortfall in governance, public administration or public service within the context of a given country or region.

This initiative is operated under the authority of the subdistrict administrative organisation in the management of natural, environmental and forest resources, granted by the Subdistrict Council and Subdistrict Administrative Organisation Act B.E. 2537. Addressing the government's urgent issue, it achieves Goal 9 in maintaining resource security and the equilibrium between conservation and sustainable use, supporting the important mission of wildfire prevention and solution at the ministry level, i.e. the Ministry of Natural Resources and Environment, as well as Thailand's mission in the Charter of the Regional Forum on Environment and Health in Southeast and East Asian Countries.

B. Please describe how your initiative addresses gender inequality in the country context.

This initiative strives to promote fair access to forest benefits and self-dependence, without deforestation. Locals are equipped with crisis preparedness through the use of MIS and GIS, the knowledge of New Theory, which is a social capital development for all and a sustainable resolution to wildfire crisis.

C. Please describe who the target group(s) were, and explain how the initiative improved outcomes for these target groups.

The target groups of this initiative are as follows.

(1) Forest destroyers or individuals living in poverty –economic mechanisms improve the outcomes for this target group via occupational promotion that enhances forest income generation.

(2) Local communities – through the use of social and local wisdom-based mechanisms, this group become engaged in the conservation and revitalisation, achieving sustainable self-dependence.

(2) Network parties –in resolving forest problems, a mechanism to promote participatory solution is devised and the Wildfire Operation Centre acts as the main coordinator and actor in driving the wildfire management missions.

5.Implementation

A. Please describe how the initiative was implemented including key developments and steps, monitoring and evaluation activities, and the chronology.

This initiative emphasizes on the community's preparedness for wildfire, and cooperation with network parties and the village committee to reduce wildfire occurrence, generate forest incomes without deforestation and build food security. It is divided into three main stages.

Stage 1: Pre-hazardStage - meetings are held to administer incident action plan. Volunteer firefighters receive training on the usage of wildfire suppression equipment and the Dashboard, which makes use of big data and open data and can be accessed via smartphones. Users can take photos of the risk areas and send them along with the coordinates to the local system administrator in a swift and effective manner.

Stage 2: Hazard Stage - this stage focuses on utilizing the Watchout Dashboard as a means of communication with wildfire suppression units and the village's volunteer firefighters upon controlling the

situation and executing incident actions. Officers from Mae Phrik SAO are prompt to get to the affected area to communicate and accelerate the evacuation, which is a crucial process in helping wildfire victims.

Stage 3: Post-hazard Stage - the Dashboard technology is used to locate the damaged areas and provide a quick damage assessment, utilized for damage recovery through reforestation, the increase of green space and damage alleviation for the victims. They may request assistance in terms of physical and mental health, occupation, shelters, and others, via the provided web board. The adoption of the Dashboard allows for swift and effective public service provision, with the indicators being the success of technological access responsive to wildfire crisis.

B. Please clearly explain the obstacles encountered and how they were overcome.

The results show that, by taking the belief and ritual-based approach, forest destroyers and individuals living in poverty have been converted into forest and are able to generate forest incomes. However, during the process, there were limitations due to reimbursement procedures. Therefore, Mae Phrik SAO informed the network parties and the community that expenses non-reimbursable by the governmental organisations should be considered the community's cooperation and thus covered by the village's development fund.

6. Innovation

A. Please explain in what ways the initiative is innovative in the context of your country or region.

This initiative employs the dashboard technology with incorporated MIS and GPS that can be used on both computer and smartphone devices. Users can promptly send photos of the hotspots and the coordinates to the system administrator of the Wildfire Operation Centre. Developed together with the Ministry of public Health and Chiang Mai University, this innovation makes use of big data and open data and accommodates four operating systems, namely the MIS, GIS, the Wildfire Watch Network and the Wildfire Suppression Units.

B. Please describe, if relevant, how the initiative drew inspiration from successful initiatives in other regions, countries and localities.

This initiative is inspired by the wildfire and forest management missions of the Department of National Parks, Wildlife and Plant Conservation that have successfully integrated the cooperation between governmental organisations and local communities within the national strategic plan and preventative measures on wildfire prevention.

C. If emerging and frontier technologies were used, please state how these were integrated into the initiative and/or how the initiative embraced digital government.

The adopted Dashboard technology improves the information provision on hotspots and coordinates of wildfire incidents that is effective for data interpretation and processing. The data can be transmitted to smartphones without delay and limitations, thus reducing the risks and damages. This technology is readily available for use in all areas and its responsiveness allows for rapid notification and swift identification of affected areas. At the large scale, it supports the country's Digital Government 4.0 scheme, as the information can be transmitted inter-organisationally in the form of big data and open data.

7. Adaptability

A. Has the initiative been transferred and/or adapted to other contexts (e.g. other cities, countries or regions) to your organization's knowledge? If yes, please explain where and how.

This initiative is a model initiative in wildfire management for other local administrative organisations in Mae Suai district, Chiang Rai province, and it is recognised by all governmental organisations in the province for its effectiveness in promoting cooperation between local communities and network parties in forest management. With the incorporated Dashboard technology, which can accommodate multiple operating systems, it has contributed to the increase of forest area by 6,297 acres. The model is applicable to forest areas in the northern region due to the cultural similarities in the way of life, customs, norms and traditions of harmonious nature coexistence, as well as risk the shared risk behaviours leading to wildfire occurrence.

8.Resources

A.What specific resources (i.e. financial, human or others) were used to implement the initiative?

(1) Human resource –a working party on wildfire prevention was established on February 2, 2018, Order No. 70/2561 to serve as the mechanism promoting cooperation and plan execution.

(2) Financial resource– an annual budget of 200,000 THB was established for continuous operation every year.

(3) Materials and equipment – an annual budget of 50,000 THB was established for necessary materials and equipment.

(3) Management resource – the Dashboard technology was adopted and operated in tandem with the existing operating systems to reduce redundancy.

B. Please explain what makes the initiative sustainable over time, in financial and institutional terms.

(1) Community members can promptly access the Dashboard and share photos and coordinates, thus saving both time and costs.

(2) The Dashboard technology accommodates multiple operating systems and contribute to the organisation's achievement in wildfire prevention and resolution.

9. Evaluation

A. Was the initiative formally evaluated either internally or externally?

This initiative was awarded the prize in 'Outstanding Local Administrative Organisations' by the Office of the Decentralization to the Local Government Organization Committee in 2019.

B. Please describe how it was evaluated and by whom?

It was evaluated by the National Institute of Development Administration (NIDA) on transparency based on interviews with officers and the public, using the CIPP model in the following aspects.

(1) Context, preparedness and engagement

(2) Administrative inputs comprised of

- 1) personnel preparedness
- 2) budget effectiveness
- 3) technology incorporation, and
- 4) collaboration management

(3) Collaboration-enhancing process

(4) Product from the implementation

C. Please describe the indicators and tools used

(1) the relevance with local problems caused by wildfire and forest invasion

(2) the civic engagement during the emergence, progression and resolution of crisis

(3) the product and outcomes, which is turning forests into the community's source of food and incomes

(4) the ability to share knowledge to the network parties and local communities, and

(5) the sustainability of use and the separation of tasks based on the community's needs.

D. What were the main findings of the evaluation (e.g. adequacy of resources mobilized for the initiative, quality of implementation and challenges faced, main outcomes, sustainability of the initiative, impacts) and how was this information used to inform the initiative's implementation

The results show that the Dashboard technology can accommodate operating systems such as the MIS and GIS and consequently, enhance community engagement in the preparation for local wildfire incidents. The locals play a crucial role from administering the incident action plans to informing responsible parties about the areas at risk of wildfire. Ultimately, this has contributed to collaborative forest management, redundancy reduction, budget saving, desirable behavioural changes, community engagement in forest conservation and revitalisation, increased food security, decreased famine and successful achievement of Sustainable Development Goals.

10. Institutional Setup

Please describe how the initiative is inscribed in the relevant institutional landscape (for example, how is it situated with respect to relevant government agencies, and how these institutional relationships have been operating).

This initiative is authorised by Subdistrict Council and Subdistrict Administrative Organisation Act B.E. 2537. Natural and forest resource management, which is categorised under the disaster prevention and mitigation, is driven by the Wildfire Operation Centre, with the local administrator acting as the director. The process is as follows.

Firstly, meetings were held to discuss plan integration and execution by network parties, including Wawee Model Highland Development Project, Highland Research and Development Institute, Mae Phrik's Watershed Management Unit, Mae Suai's District Administration Division, local educational institutions and others.

Secondly, operating systems and MOUs were administered, and each village was encouraged to draft their regulations on forest use.

Lastly, the Dashboard technology was implemented to involve the locals in all stages of wildfire prevention and incident action, from pre- to post-hazard stage.

11. Stakeholder Engagement

The 2030 Agenda for Sustainable Development puts emphasis on collaboration, engagement, partnerships, and inclusion. Please describe which stakeholders were engaged in designing, implementing and evaluating the initiative and how this engagement took place.

This initiative corresponds to the 2030 Agenda for Sustainable Development with the emphasis on the collaboration-enhancing process, as follows.

(1) Individuals living in poverty were engaged in the process and economic mechanisms were used in the evaluation process of encouraging forest income generation without deforestation, knowledge provision and forest-based occupational promotion.

(2) By using the local wisdom-based mechanism, the local community was engaged in the promotion of forest conservation and revitalisation, with the collaboration from monks, community members, schools and leaders.

(3) Network parties joined forces to put the plans into action across all stages with the technological support from the Dashboard that involved collaboration from all sectors.

12. Lessons Learned

Please describe the key lessons learned, and how your organization plans to improve the initiative.

(1) Due to the steep nature of the hillslopes, locals had difficulty accessing certain areas; as a consequence, the SAO has administered a solution by creating firebreaks along the ridges and streams to prevent the spread of the fire. Moreover, large water containers are set to be installed in high risk areas.

(2) In case of spread to residential areas, the SAO has planned to install large water containers between households to allow for prompt suppression, as well as providing necessary equipment for each village.

(3) Occupational promotion plan and training on New Theory farming will be provided in order to increase forest resources that would serve as the sustainable source of food and incomes for the community.

(4) Wildfire crisis preparedness and Dashboard use can be promoted by employing the notions of social capitals development and nonformal education, resulting in knowledge transfer and sustainable local development.