

Collaborative Practice during Forest Fires Disaster: A Narrative Policy Framework

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ARTICLE INFO	ABSTRACT
<p>ORIGINAL ARTICLE</p> <p>Article history: Received: 18 Jul 2021 Revised: 15 Dec 2021 Accepted: 02 Jan 2022</p> <p>*Corresponding author: Alamsyah Alamsyah</p> <p>Address: Jl. Palembang – Prabumulih KM. 32, Indralaya, Ogan Ilir, Sumatera Selatan, Indonesia</p> <p>Email: alamsyah78@fisip.unsri.ac.id</p> <p>Tel: +62-812-71-858-858</p>	<p>This study aims to explain collaborative practices during forest fire prevention and mitigation in Indonesia using a narrative policy framework (NPF). The primary data was collected from 30 informants related to forest fire mitigation in South Sumatra Province (SSP) using in-depth interviews. The secondary data was from online media that publishes news on forest fires. This study adopts a deductive approach and an interactive model during organizing, processing, and analyzing using ATLAS.ti 8 for Windows. Based on the NPF approach, this study has found that there are different views among the policy actors about the character (the villain, the hero, and the victims), the plot, and the solution policy (moral of the story) within the narrative of forest fires in SSP. This study recommends government institutions increase the quality of taskforce governance so that it can facilitate the learning process, enhance trust, minimize conflict tension, and promote participative decision-making between policy actors within the forest fire policy sub-system.</p> <p>Keywords: Disaster, Indonesia, Local Government, Stakeholder Participation, Wildfires</p>

Introduction

Forest fires are a global public concern. It consists of various issues, such as environmental issues (i.e., global warming, climate change, and biodiversity), health issues (i.e., respiratory symptoms, asthma, outdoor activity, and general health), economic issues (i.e., employment, profit and economic loss, economic growth, and livelihood), and political issues (i.e., the failure of governance, regional conflict in Southeast Asian region, and international law). As a disaster event, forest fires could give a negative impact on various Sustainable Development Goals (SDGs), for example, Goal 1 (no poverty), Goal 2 (no hunger), Goal 3 (good health and well-being), Goal 4 (quality education), Goal 8 (decent work

and economic growth), Goal 9 (industry innovation, and infrastructure), Goal 11 (sustainable cities and communities), Goal 12 (responsible consumption and production), Goal 13 (climate action), Goal 15 (life on land), Goal 16 (peace, justice, and strong institution), and Goal 17 (partnership for the goals).

Forest fires have been happening in Indonesia since the 1960s, when the Government of Indonesia (GoI), under the New Order regime, started to develop the commercial timber industry and continue the transmigration program^{1(pp13-17)}. In the late 1980s, the GoI also promoted the pulp and paper industry and palm oil industry that have been contributing to forest fires, since the private

corporation, like a slash-and-burn farmer^{2(pp75-100)}, uses fire as a method of land clearing³⁻⁵. Although there is scientific evidence showing the contribution of El Nino⁶, poverty, remoteness, underdevelopment⁷, and criminality⁸ to forest fires, it is not a natural disaster that should be prevented or mitigated. Conversely, forest fires are a manmade disaster, since they are a part of the land management process⁹ and the effect of ongoing deforestation of Indonesian peatland¹⁰.

In 1997/1998, the last forest fires occurred in Indonesia during the New Order regime. The total area burnt was estimated to be 4.5 million hectares and has emitted 90 Tg of CO₂ and 0.36 Tg of CH₄¹¹. Another scholar showed that it has contributed a significant 13-40% atmospheric CO₂ concentration ever since records began in 1957.¹² Many studies have shown how this disaster is harming public health,^{13,14} especially for older people, children, men, and women,¹⁵ local climate change,^{16,17} and the forest ecology.^{18,19} It also costs the GoI around \$8.8 billion and \$9.7.²⁰

Since 1999, Indonesia has gone through the Reformation Order. The socio-political landscape has also changed drastically (i.e., multiparty system, direct presidential election, direct local elections, freedom of the press, the amendment of the constitution, decentralization, and so on). However, political change does not necessarily produce a positive impact on forest fires. For fifteen years, forest fires occurred particularly in Sumatra and Kalimantan islands. The GoI must give serious to preventing and mitigating forest fires during Jokowi's era. President Jokowi has made a number of policies to anticipate and mitigate this disaster, such as law enforcement, water bombing, weather modification, small farmer empowerment, and strengthening the institution and the process of forest fire management at the national and the regional (province/district) level. The GoI also promotes collaborative strategy between the government, market, and civil society in forest fire management. Unfortunately, a recent study²¹ has shown that although the GoI has implemented 60 fire management interventions during 1999-2016,

policy actors (government, private corporations, and non-government organizations) tend to adopt different intervention strategies. It indicates that there is a severe problem in the collaborative effort during forest fire management in Indonesia. Based on this empirical situation, this study is designed to explain collaboration practices within forest fire management.

The current finding shows a scientific debate among researchers on the topic of forest fires in Indonesia. Some researchers have found that there is no collaboration in forest fire governance, since the government views forest fires as a security problem, not as a disaster that requires intensive cooperation between multi-stakeholders.²² Fernandes and Panjaitan²³ has found that community and corporate community under forest fire governance has an increased chance in creating good forest fires governance. However, this finding contradicts another study that has recommended the disempowerment of farmer group organization through law and policy in order to effectively reduce fire.²⁴ This study is designed to contribute to this debate by applying Narrative Policy Framework (NPF) as a theoretical framework.

Theoretically, collaboration refers to the process of facilitating and operating on a multi-organizational level to solve problems that cannot be resolved, or solved easily by a single organization.^{25,26} This concept has replaced the concept of responsiveness in public administration literature.²⁷ Each collaboration must be cooperative. However, not all cooperation contain the five key elements of collaboration (governance, administration, mutuality, norms, and organizational autonomy).²⁸ Collaboration is a cycle of process consisting of five key variables, including face-to-face dialogue, trust-building, and commitment to the process, shared understanding, and intermediate outcome. These five variables are related to each other. For example, face-to-face dialogue indicates communication among the related party in the collaboration. However, this communication cannot produce collaborative effort without a shared understanding.²⁹

Previous studies have also stressed various variables that contribute to the process of collaboration, such as face to face dialogues, trust-building, the development of commitment and shared understanding,²⁹ multi-organizational arrangement, network, trust, mutually beneficial relationship,^{30,31} structural and institutional factors,^{32,33} power-sharing and negotiations,³⁴ collective-action belief,³⁵ cultural viewpoint,³⁶ and belief system convergence³⁷.

In the context of disasters, many studies have shown that collaboration is influenced by legitimacy and mutual trust,³⁸ control and power,³⁹ strong leadership and scientific research,⁴⁰ facilities and infrastructure, funding resources and capacity building,⁴¹⁻⁴³ deeper and shared understanding and knowledge on disaster incident,^{44,45} resource accessibility, confusion of functional designation of organizations,⁴⁶ patterns of actor, and task interdependency.⁴⁷ Awareness, regulation/policies, team partnership, regime change, and organization restructuring are also a few factors contributing to a collaborative network for disaster mitigation.⁴⁸⁻⁵¹ In Indonesia, particularly in South Sumatra, studies by Achyar, Schmidt-Vogt, Shivakoti,⁵² showed that the institution of forest fires collaboration is influenced by intra-forum coordination dynamics, transparency in decision making, collective learning quality, and decentralization within the implementation process.

Although the prevention and mitigation of forest fires in Indonesia have shown collaborative efforts between parties,^{22,24,52} this collaboration still faces severe problems, such as lack of coordination between actors, fragmented perspective on the root of forest fires, and lack of facilities and infrastructure.⁵³ This collaboration, particularly at the community level is not based on trust and reciprocal relationship, but rather on the economic incentives provided by the plantation corporations and the government budget. This policy only increases the citizens' compliance with regulation, but does not induce voluntary behaviors.⁵⁴ However, the authors have not also found any scientific research that seeks to explain this

phenomenon with the NPF. As a disaster, the trigger to forest fires, facilitation, and production is a collective action under a thousand narratives. It has happened because humans and the organization they represent is homo narrans (someone or something that always create, produce, and delivers the story). As a theoretical framework, the NPF could be used to simplify the complexity of the policy narrative and helping policy actors to gain a better understanding of policy issues.

The phenomenon of collaboration between actors within forest fires prevention mitigation is a part of disaster management or disaster policy in Indonesia that contains a policy narrative. For NPF, each policy narrative has a setting or context, a story plot, a character, and the moral of the story or the policy solutions.^{55,56} the setting or context refers to a policy arena, a policy subsystem, or a socio-cultural context. A story plot is a pattern of narrative, or the story flow created by the policy actors as an instrument to advocate their policy preferences. In this story, the policy actor can be grouped into three categories. They include the heroes (the policy actors who contribute to fixing the problem), the villain (the policy actors who create the problem), and the victims (someone or something who receive the negative impact as a result of the policy problem). The victims may be humans, animals, or plants. Finally, each policy actors have a moral of the story (perception of the best policy solution based on their policy preferences).

Material and method

This study adopts a qualitative method and a non-experimental research design to organize the research process. The authors collect primary data through face-to-face interview with 30 informants who are related to forest mitigation efforts in South Sumatra Province (SSP). The authors also gathered secondary data from online newspaper publishing online news on forest fires and from government and plantation corporations' website, and non-government organizations (NGO) publication or website. SSP was chosen as the research location, since many fire hotspots has occurred in the area in

one decade (2009–2019). This study has applied an interactive model^{57(p33)} and a deductive approach^{58(pp107-115),59(pp1-10)} to analyze data. The process of data analysis follows several steps. First, all research data (i.e., interview transcription, online news, government publication, plantation corporation publication, and NGO publication) is imported to ATLAS.ti 8 for Windows.⁶⁰ Second, the process of open coding uses a deductive approach by applying NPF to categorize data. At this stage, the authors classify and interpret data into several codes, such as the villain, the hero, the victim, the context of the story, the story plot, and the moral of the story (policy solution). Third, the authors start the selective coding by focusing on finding any relation or interaction between the codes. Fourth, the authors visualize the data to help generating findings and generalization. A micro-level analysis is applied to analyze, interpret, and explain the findings.

Result

The background

SSP is an autonomous region in Sumatra Islands, Indonesia. It is located at 1°–4° South Latitude, and 102°–106° East Longitude and has a total area as much as 86,700.68 km². Based on elevation (altitude from sea level), the plains in the SSP consist of four categories area, including 0 - 25 meter (23,5%), 26 - 50 meter (17,7%), 51 - 100 meter (35,3%), and >101 meter (23,5%). There are 13 district governments in SSP, four municipal governments, 239 sub-district governments, 2,862 rural village governments, and 1,318 urban village governments^{61(pp1-125)}.

In 2019, SSP had a population of as much as 8,37 million people. Within eight years (2012-2019), the population has increased by 890 thousand people. In 2019, the population of the SSP had grown as much as 0.01 % with a population density of 95.75 people/km², and a sex ratio of 103.29 %. The number of labor force in SSP has reached 4,1 million people with a 4.23 % unemployment rate^{61(pp37-84)}.

In 2019, the economic growth in the SSP was 6.04 %. The mining sector (20.2 %) has

contributed most significantly to this growth, followed by manufacturing industry (19.5 %), agriculture, forestry, and fishing (14.8 %), construction (13 %), and wholesale and retail trade, cars and motorcycle repair (12.9 %) ^{61(p374)}. Although agriculture, forestry, and fishing industry has the third position as the Gross Regional Domestic Product (GRDP) contributor, most of SSP population still depend on palm oil (production: 4.7 million tons per year, planted area: 1.3 million hectares), rubber (production: 1.1 million tons per year, planted area: 1.3 million hectares), coconut (production: 57 thousand tons, planted area: 65 thousand hectares), and coffee (production: 184 thousand tons per year, planted area: 250 thousand hectares) as the primary source of family income^{61(p231)}.

The narrative form

The characters

According to NPF theorist, character is the entity or the subject who acts or is acted upon. Characters are often individuals, agencies, and/or groups (public and private). Operationally, a hero is the potential fixer of the policy issue. A villain is an entity causing policy problem. A victim is the one harmed by the villain.⁵⁶ Between 2014 – 2018, many policy actors have participated in forest fires mitigation efforts in the SSP that represent the central government (the Coordinator Ministry of Politics, Laws, and Security, the Ministry of Forestry and Environment, Ministry of Home Affairs, Indonesian National Armed Forces, the Indonesian Police, the Peat Restoration Agency, Meteorological, Climatological, Geophysical Agency, the Supreme Court of Indonesia, and National Disaster Relief Agency), provincial government (the executive, the legislator, and the agency), district/municipal government (the executive, the legislator, and the agency), private corporation (oil palm plantation and industrial forest plantation), non-governmental organization, and the villagers at the grass-roots. These actors had been collaborating to prevent and mitigate forest fires in the SSP since 2014-2018. This collaboration is President Jokowi's order stipulated

in his Presidential Instruction Number 11/2015 on Improved Forest Fire Control. At the central government, the Coordinator Ministry of Politics, Law, and Security was appointed by President Jokowi as the leader of the National Task Force on Forest Fire management. In the regional and district government, the provincial and district government should establish a similar task force.

In SSP, members of the forest fires task force are recruited from a local bureaucracy agency, private plantations, and local NGOs. The forest fires task force is responsible in preventing and mitigating forest fires using several methods, such as law enforcement, public campaign, canal blocking, technology innovation, peat restoration,

routine patrol, community empowering, weather modification, water bombing. For analysis, these actors could be grouped into four categories, including central government, regional government, non-government organization, and Private Corporation. The selective coding process (Table 1) depicts the perception of policy actors regarding the victims, the villain, and the hero in the effort of forest fire prevention and mitigation in SSP. There is a similar argument regarding the victims of forest fires between the central government and regional government. NGOs only stress the smallholder farmer as the victims of forest fires. Also, private corporations perceive themselves as the victims of forest fires.

Table 1. The character in the forest fires collaboration

	Perception on the characters		
	Victim	Villain	Hero
Central government	Environment, economy, state, society	Private corporation, smallholder farmer, the weathers.	All government institution, private corporation that comply to the regulation, the farmers who participate in forest fires prevention and mitigation
Regional government	Environment, economy, state, society	Smallholder farmer and the weathers.	
Non-governmental organization	Environment, society, and smallholder farmer	The government and the plantation corporations	The government, smallholder farmer, and non-governmental organizations
Private corporation	The private corporation, environment, society, and the government	Smallholder farmers.	All government institutions and private corporations

Policy actors also have different viewpoints about the villain of forest fires. All policy actors agree that the weather is the villain of forest fires. However, only the central government and the NGO perceived private corporations as the villain. All policy actors (central government, regional government, and plantation corporation) viewed the smallholder farmer as the villain, except the NGO. To mitigate the forest fires, the central government and regional government stress all government institutions, the private corporation that compliance to regulation and the farmers who are involved in preventing and mitigating forest fires. Conversely, NGOs has introduced the government, smallholder farmers, and non-governmental organizations as heroes. They have

excluded private corporation as the hero in forest fire mitigation. This perception contrasts with the view of plantation corporations. They perceive the government institution and private corporation as the hero, except the NGOs and smallholder farmer. Table 1 indicates the huge differences in viewpoints between NGOs and plantation companies.

Setting

The setting refers to a space where the story takes place over time. It could be a specific context or a broader social-economic-geographic political context. One policy narrative may cross various settings and maintain it as a constant.⁵⁶ Based on this definition, the setting of collaborative practices during forest fire disaster has several meanings.

First, it refers to the special task force for forest fire mitigation effort at the central, province, or district level. Members of this task force represent the state, market, and civil society actors. There is a vertical (namely between the central government and province or district government) and horizontal collaboration (i.e., between province or district government and the oil palm or forest industry plantation) practice in this setting.

Second, the setting refers to the administrative boundary (see, the background), ecological environments, and the socio-economics-cultural situation in SSP. From the environmental perspective, SSP has two types of land area, including highland (>51 masl, 58, 8%) and lowland area (0 – 50 masl, 41, 2%). In the highlands, the villagers plant coffee, tea, pepper, clove, cocoa, and various vegetables and fruits. In the lowlands, the villagers plant rubber, oil palm, wetland and dryland paddy, and different kinds of vegetables. The villager is fishing with traditional equipment on the peatland after the rainy season. Both in highland and lowland areas, the villagers still use fire to clear land or practice slash-and-burn agriculture. This practice has been protected by the *Simbur Cahaya* (the codification of customary law in the SSP). Formally, this law has been abolished by Law No. 5 of 1979 of the Village Government. However, slash-and-burn agriculture or shifting cultivation practice continues until today. Also, of the 3.9 million labor force in SSP, people who work in agriculture, forestry, hunting, and fishing sector has reached 1.9 million people.^{62(p51)} Since the late 1990s, the lowland areas have been transformed for the forest industry and oil palm plantation. Today, SSP has 179 thousand hectares of oil palm plantation and 1.7 million hectares of forest area for permanent production. The forest industry (1.3 million hectares) is owned by 19 private corporations.⁶³ As a comparison, SSP has 578 thousand hectares of protected forest lands and only 790 thousand hectares of sanctuary and conserved forest.^{62(p136)} Both the institutional arrangements of the task force of forest fires mitigation and the socio-ecological situation in SSP affect and shape the policy actors to construct

a policy narrative. This is discussed in the next section.

The plots

NPF theorists have stressed that the plot is not just a flow of events. The plot is the narrative component that connects characters as well as the setting. Plot organizes actions, draws attention to facets of the setting, and usually highlights the moral of the story.⁵⁶ Based on the coding process, there are three different story plots on forest fires mitigation in SSP. The first story plot comes from the government actors (the central, province, and district government). It starts with the political commitment of President Jokowi to mitigate forest fires seriously after the forest fire incident in 2014.

During 2015-2019, the government (the central, province, and district government) has developed the forest fires taskforce earlier even before forest fire occurred in the province/district, especially in Sumatra and Kalimantan Island that is susceptible to forest fires. As mentioned above, the forest fires taskforce prevents and mitigates forest fires through various programs, such as law enforcement, public campaign, community empowering, routine patrol, canal blocking, technology innovation, weather modification, water bombing, and peat restoration. Through law enforcement programs, the government has revoked the licenses of corporations in the forest industry whose land was burnt. In 2019, 6 plantation corporations and 249 people were allegedly involved as perpetrators of forest fires in Kalimantan and Sumatra.⁶⁴ The central government has made a request that local governments must write local regulations on forest fire mitigation. SSP has enacted the Provincial Regulation of South Sumatera No. 8 of 2016 on Forest Fire Mitigation to respond to this request. In SSP, the forest fires taskforce also realizes public campaign through various media, such as outdoor advertising, social media, and community meeting. The central message of this campaign is that all entities (corporations or villagers) are “prohibited to use fires in land clearing” or “using fire to clear land is illegal” or “burning forest or agricultural

land is a criminal act.” In each sub-district, the civil servants, the soldier, the police, and the village government cooperate in disseminating this message to the villagers during the public campaign.

The government and plantation corporations have also developed local institutions at the village level to promote and organize the villager's participation in forest fire mitigation efforts. For example, the Ministry of Forestry and Environment had built the Fire Awareness Community (*Masyarakat Peduli Api/MPA*) program. The National Disaster Relief Agency has created Disaster Resilient Village (*Desa Tangguh Bencana/DESTANA*) program. Sinar Mas Group, a forest plantation, has Free-Fire and Prosperous Village (*Desa Makmur Peduli Api/DMPA*) program. MPA, DESTANA, and DMPA are managed based on an incentive scheme to educate, train, and promote the villagers in preventing and mitigating forest fires. The government has also created command posts (*Pos Komando* or *Posko*) as the checkpoint in area that are vulnerable against forest fires. Members of the command post are recruited from a government agency, the army, and the police.

The government also built canal blocking as a strategy to retain moisture in peatlands to prevent fires. In the dry season, the government, the army, the police, MPA, DESTANA, and DMPA regularly patrol to investigate data gained on fire hotspots via satellite through ground check. They function as the infantry, artillery, and light cavalry in the military unit. This army of troops is the front line in extinguishing forest fires. They will be assisted by the air force, which will carry out water bombing using choppers. The government also uses weather modification technology to induce artificial rain. When the rainy season arrives, the forest fire taskforce will be dissolved by the government. In short, this story shows how the government views the forest fires incident as a disaster that should be prevented and mitigated.

The second story comes from private corporations (oil palm plantation and forest

industry plantation). Private corporations are prohibited by the law to use fire to clear the land. As good investors, they must obey the law. It is why they collaborate with many stakeholders to prevent and mitigate forest fires in SSP using various programs. Numerous causes could trigger forest fires in the concession area. For example, many concession areas located at the border with the villages still practice slash-and-burn agriculture and extractive activity (i.e., fishing) for their livelihood. Since private plantations corporate cannot watch and control all the concession areas, fires could be caused by these practices or other accidental actions (for instance, throwing away cigarette butts).

The last story comes from environmental NGOs in SSP. Many NGO activists in SSP agree that forest fires are a disaster. However, they stress it as an ecological disaster to show that the cause of forest fires is ecological or environmental. According to *WALHI Sumsel* activist, forest fires, especially peatland, in SSP start with the conversion of forest into palm oil plantation and for use in the forest industry. These corporations receive license from the government and use fire in a land clearing to minimize production costs. Although these plantation corporations contribute to local economic development (i.e., economic growth, creating jobs, reducing unemployment), they also do environmental damage (i.e., losing carbon stock in the peatland area) and cause ecological imbalance (i.e., monoculture forest hurts biodiversity) (Interview, 09/07/2017).

It is why many environmental NGOs in SSP reject and do not agree with the government that accuses smallholder and cultivation agriculture as the cause of forest fires in SSP. NGO activists develop two reasons to support this argument, including (a) the smallholder has a small farm; (b) the villager applies local wisdom in the land clearing process using fire. Also, according to NGO activists, using fire to clear land is a legal act, protected by Law No. 32/2009 on Protection and Management of the Environment.

In some cases, various environmental NGOs

have given a positive feedback for the government's response in preventing and mitigating forest fires in SSP. They on the one hand agree with law enforcements if arresting and adjudicating is done on plantation corporations. However, they on the other hand do not agree with the police in arresting smallholders in land clearing. SN (KEMASDA Foundation activist), one of the local NGOs in SSP, said that "the government can only prohibit villagers using fire in land clearing without providing alternative solutions to farmers for land clearing without fire." (Interview, 12/02/2017).

Many environmental NGOs also do not agree with using water bombing method to mitigate forest fires. For YN (Wanaha Bumi Hijau activist), one of the local NGOs in SSP, forest fires in peatland are very different from forest fires in non-peatland area (i.e., forest area). In the peatland, fires are located underground. Fire will not be extinguished if only the ground surface is watered. Given that water bombing only wets the peatland surface, it is not effective in mitigating forest fires in peatlands. In addition, water bombing tends to waste public funds.

For environmental NGO activists in SSP, forest fires are a product of the government's inconsistency in law enforcement, promotion of economic development based on sustainable development, and the failure of agrarian reforms, especially inequality in land ownership. Today, according to YN, agricultural land (peatland and non-peatland) in SSP is owned by only nine private corporations (oil palm plantation and forest industry plantation).

Even though the government of SSP has created the forest fires task force and provides a room for local NGOs to participate in this teamwork, the role of local NGOs is minimal. Local NGOs activist do not participate, since they have different narration with the government and the corporations. Many environmental NGOs in SSP stress that forest fires are the product of the government's failure in many sub-system policies, such as law enforcement, sustainable development, and agrarian reforms.

Moral of the story

Each policy solution proposed by the policy actor, especially the hero, to protect the victim or to punish the villain could be categorized as the moral of the story.⁵⁶ In the case of forest fires, government, private corporations, and environment NGOs have different solutions in managing forest fires. For the government, forest fires should be prevented and mitigated through law enforcement, public campaign, community empowering, routine patrol, canal blocking, technology innovation, weather modification, water bombing, and peat restoration. This solution is a logical consequence of "forest fire, a disaster" narration developed by the government. Private plantation corporations should obey this policy, since the government is the regulator.

On the contrary, environment NGOs has proposed different solution policies to prevent and mitigate the forest fires, such as (a) eradicating environmental corruption; (b) evaluating concession permits; (c) forest fires prevention; (d) peatland restoration; (e) protecting local wisdom; (f) conditional burning for the smallholders; (g) reforming peat land-use policy; and (h) restoring natural resources around the villager's area. This solution is consistent with the local environmental NGOs' view that builds a narrative that forest fire is a land-use policy problem, and not as a disaster.

The narrative content

The narrative content consists of two constructs, including belief system and narrative strategy. Belief systems are a set of values or beliefs that orients individuals, groups, coalitions, and societies. Meanwhile, narrative strategy refers to the process of how the policy actors communicate the narrative externally for various purposes, such as to persuade, dampen, recruit, or inflame conflict.⁵⁶ The authors borrow the result of previous research to explain the belief system of policy actors in SSP, especially regarding forest fire incidents. According to a research (see Figure 2), the belief system of policy actors have three hierarchical layer, including deep core belief (DCB), policy core belief (PCB), and secondary

policy belief (SPB).^{65,66} DCB is more difficult to modify compared to PCBs and SCBs that are changed easily due to policy learning in the policy process. The DCB of government and plantation corporation could be labeled as 'developmentalism', since they perceive forest fire as a disaster and abandon the effect of other sub-

system policy (i.e., law enforcement, agrarian reform, land-use policy, economic development) to forest fires incident. Conversely, the DCB of NGOs could be labeled as 'environmentalism' because they promote sustainable development. It indicates a conflict of DCB among policy actors in forest fire incidents in SSP.

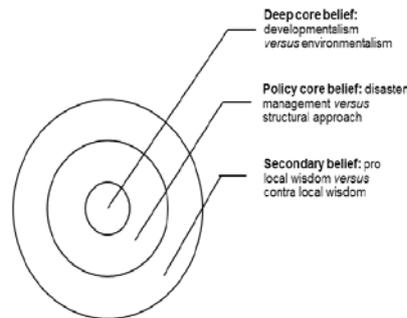


Figure 2. The belief system of policy actor in forest fires

The SSP forest fire prevention and mitigation approach describes the PCB's policy actors in SSP. Given that the government creates a set of activities that follows a disaster, this approach could be labeled as 'disaster management.' Meanwhile, the local NGOs' approach could be labeled as a 'structural approach' because they give more attention to macro policy or the effect of other subsystem policies to explain forest fires. The different PCB approach between the government and NGOs can explain why local NGO activists do not participate in the forest fires taskforce.

The final layer of the actor's belief system is SCB. SCB is the easiest to change due to frequent updates in scientific information (i.e., daily/monthly/yearly weather forecast, hotspot and fire spot distribution, rainfall rate, wind direction, peatland ecosystem, and land ownership by the smallholder) on the public problem. Scientific information can help policy actors in revising their perception of the cause and effect of forest fires. For example, local NGOs claim that smallholders are not the villain in the forest fire scenario, since the agriculture is not the cause of forest fires. Based on this claim, local NGOs suggest that the government allow smallholders to burn but on

condition. Conversely, the government needs to create a regulation that prohibits smallholders and corporations from using fires in land clearing. This regulation is based on the claim that land clearing, especially slash-and-burn agriculture, which is the cause of forest fires incident.

Therefore, scientific information can play a strategic role as a mediator and bringing new evidence for policy actors to support, reject, or revise their claim. Even though the government has designed the institution for collaborative effort between multiple stakeholders, information exchange between the government and the NGOs do not exist due to the missing of a shared understanding on specific issues in forest fires incidents. Different belief systems between policy actors trigger a different narrative strategy between actors. The government's apparatus (politicians, civil servant, the soldier, and the police) and the corporation use hierarchy to transmit and communicate their narrative to the public. While local NGOs use social media and community empowerment programs to disseminate their narrative.

Discussion

Overall, the finding shows the power of NPF as a framework for understanding collaborative

processes. Although the government has created institutional arrangement to facilitate collaboration among forest fires multi-stakeholders, it only involves corporations and the government. In this institutional arrangement, local NGOs have been marginalized due to policy narrative divergence that is rooted in narrative content or actor's belief system.

The result also supports the views of Ansell & Gash²⁹ who stress trust-building, commitment to the process, and shared understanding in the collaborative process. In this research, variability in the belief system is a natural phenomenon because people in the social context are heterogeneous. This variability does not indicate conflict. It only displays pluralism in social life, and it cannot be deleted. It should be managed in line with democratic values. The government institution should open the windows of collaboration and ensure mutual collective learning⁵² between policy actors during collaborative process, so that there is a convergent belief system³⁷ facilitating trust-building^{29-31,38} and shared understanding.^{29,34}

In disaster literature, this study also supports a previous finding that stresses mutual trust³⁸ and deeper shared understanding^{44,45} as the independent variable affecting collaborative process in forest fires prevention and mitigation. However, it refutes a previous research that stresses the influence of scientific evidence on forest fire prevention and mitigation.⁴⁰ Specifically, this research rejects a previous finding regarding collaboration within forest fire mitigation in SSP.⁵²

Even though this research can explain collaborative effort using NPF based on information from the key informant in forest fire mitigation, it has abandoned the voice of the villagers. According to the 2018 Village Potential Census, 72 village (2.21%) are involved in forest fire incident in SSP. This village has a different livelihood source, geographical condition, culture, quality of village government, population, and is in a different district. This situation will produce a complex narrative that represents the voice of the villagers on forest fire prevention and mitigation in

SSP. A special study is required to capture the voices of the villagers on the collaboration of forest fire mitigation in the SSP.

This research is only descriptive, since the focus is only in explaining the component of narrative in forest fire mitigation in SSP. This study cannot answer, for example, what is the effect of policy narrative on policy learning or policy change in collaboration within forest fire mitigation? What is the effect of the attribute of narration, for example, level of the narrator's trust, narrative transportation, level of narrative breach, on the level of narrative persuasion? These questions challenge Indonesian scholars to explain collaboration further in the forest fire mitigation using NPF.

In the era of big data, narrative grows exponentially, including the story of forest fires mitigation. When public sector uses various social media platform as an instrument to increase public awareness on forest fires, internet users as a citizen can also create their own stories regarding forest fires incident. This study suggests a further research to explain collaboration phenomena in forest fires using big data methodology.

Conclusion

Forest fires in Indonesia have been happening for one decade. Under the Jokowi regime, the GoI has a high political commitment to manage forest fires incident. They created a special taskforce to prevent and mitigate the forest fires. This taskforce adopts and promote horizontal and vertical collaboration among forest fires stakeholder in central and regional (province/districts) level. Unfortunately, this collaboration exists between government and private corporation only. The local environmental NGO in SSP cannot participate in the taskforce due to different policy narrative with the government and the private corporations. Based on this finding, this study suggests that the government increases the quality of taskforce governance, so that it can facilitate the learning process, enhance trust, minimize conflict tension, and promote the participative decision-making process between policy actors within the

forest fires sub-system.

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