SITUATION AWARENESS AND COVID-19:
LESSONS LEARNED IN CONVEYING WARNING

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Introduction

Weeks before 30 January 2020, when the government officially reported the first confirmed case of COVID-19 in the country, there had been no early and comprehensive warning about an impending pandemic scenario in the Philippines. Since the end of January 2020, much of government efforts have been about responding to the onset and outbreak of COVID-19. To date, the Philippines is still under a State of Public Health Emergency[1] and State of Calamity.[2]

COVID-19 is a relatively new infectious disease brought about by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). COVID-19 impacts most severely on the elderly and persons with pre-existing health conditions.

In 2012, through Executive Order (EO) No. 82, the government promulgated the National Crisis Management Core Manual (NCMCM) as the primary guiding document for dealing with crisis. The intention of EO No. 82 was to establish a national crisis management framework, which covers government actions before, during, and after a crisis. In the NCMCM, the first component of the National Crisis Management Framework (NCMF) is **Predict** or Situation Awareness.

Situation Awareness is essentially a process of "imagining" the future. The early warning products that result from this process include scenarios of how a crisis can unfold in the long term. Conveying warning products that communicate scenarios, among others, serves the purpose of helping national and local decision-makers plan way ahead of a crisis. Warning products that relay and help simulate possible scenarios contribute in informing and prompting decision-makers into preventive actions. These can also assist national and local decision-makers in rehearsals for interagency collaboration in order to avoid or at least mitigate the impact of an emerging crisis.

This paper intends to assess the implementation of the NCMF Situation Awareness process in light of the COVID-19 pandemic. It argues that, despite prescriptions in the NCMCM, the conduct of Situation Awareness process had not been fully undertaken. It argues further that no early warning product, as described in the NCMCM, had been produced and disseminated to national and local decision-makers in connection with the COVID-19 pandemic.

This paper attempts to address the following questions: (1) How was the Situation Awareness process implemented before and at the onset of the COVID-19 pandemic in the Philippines?; (2) What are the perceived gaps in the implementation of the Situation Awareness process?; and, (3) What recommendations can be made to strengthen the implementation of the Situation Awareness process?

I. The NCMCM and the National Crisis Management Framework (NCMF)

EO No. 82 series of 2012 by then President Benigno S Aquino III declares that the NCMCM "shall be the overarching framework for national crisis management" and instructs all government agencies at national and local levels to "craft and/or harmonize their respective operational manuals, contingency and crisis action plans for human-induced crises."[3] The NCMCM was crafted to address the need for a "pro-active, diverse and collaborative approach among government agencies and other stakeholders in preparing for, preventing or mitigating the effects of, and recovering from crises."[4]

Figure 1: The National Crisis Management Framework (NCMF)
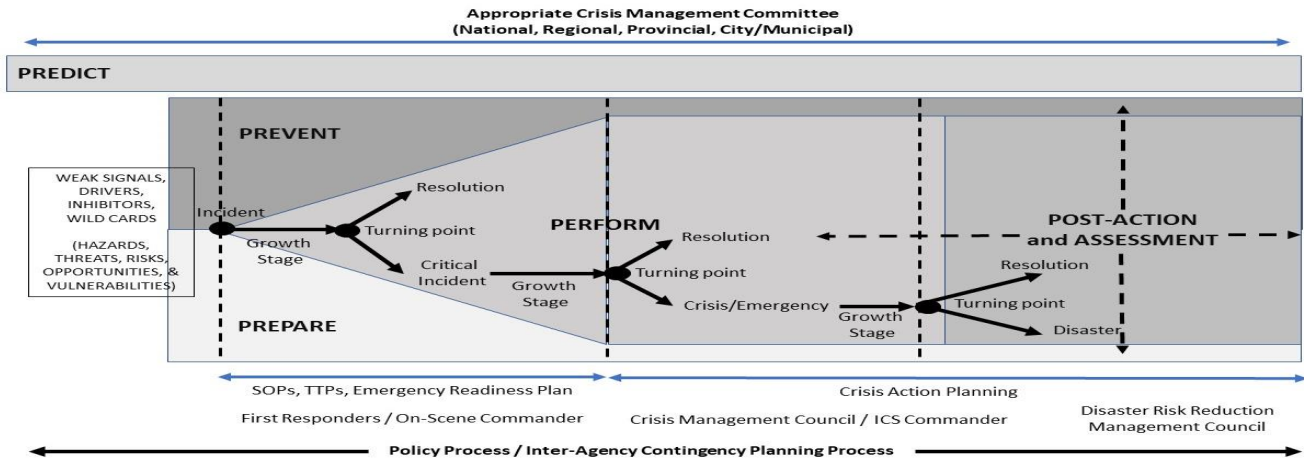
A. The 5Ps of the National Crisis Management Framework (NCMF)

The NCMCM provides for a National Crisis Management Framework, which comprises five (5) key components: Predict, Prevent, Prepare, Perform, and Post-Action and Assessment.[5]

The **Predict** component pertains to the process of producing "foresight" and conveying warnings. It scans the environment for potential and emerging factors that can give rise to a crisis. It also develops scenarios and produces warning products for the benefit of decision-makers at the national (strategic) and local (operational/tactical) levels. This paper focuses on this crucial, initial phase of the National Crisis Management Framework.

The **Prevent** component prescribes "deliberate action aimed at avoiding future harm by addressing its causes." Prevention also covers mitigation of harmful effects if a particular incident cannot be prevented.

The **Prepare** component focuses on capability-building and enhancement, which covers planning, organizing, training, equipping, exercising, evaluating, and improving. Such steps constitute the "preparedness cycle."

The **Perform** component is the actual execution of contingency or crisis action plans. The priority shifts from enhancing capabilities to saving lives and protecting properties, among others.

The **Post-Action and Assessment** component occurs after the crisis when things begin to normalize. This stage is about evaluation of actions and improvement of prevention, preparation, and execution.

II. Situation Awareness: The "Foresight" of NCMF

The Situation Awareness process is the "Foresight" or "Predict" component of the NCMF detailed in the NCMCM.

A. What is Foresight?

In the context of the NCMF, Situation Awareness is what is understood in the literature as "foresight."[6] Foresight is the process of anticipating the future and attempting to project probabilities and generate options for actions.[7] It is "broadening the boundaries of perception...by assessing the implications of present actions, decision, etc. (consequent assessment)… detecting and avoiding problems before they occur (early warning and guidance), considering the present implications of possible future events (pro-active strategy formulation), and envisioning aspects of desired futures (preparing scenarios)."[8]

The inclusive process of foresight necessitates active participation and interaction among various actors in anticipation of different futures.[9] It pays special attention to "dialogue and discussion formats, general outlooks, and alternative scenarios as applied for generating visions, strategies, and policy- or decision-making."[10] It is a dialogic and interactive process wherein various stakeholders are embedded.[11] A crucial by-product of the interaction among agencies and stakeholders is the establishing or strengthening of social networks among them.[12] Interaction among stakeholders also promotes knowledge-sharing and familiarity on who can produce which type of knowledge.[13]

Foresight processes have been used in other

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countries for a variety of issue areas, including science and technology, education, business, and globalization.[14] As an important government function, foresight is embedded in the decision-making processes of a number of countries such as Singapore,[15] United Kingdom, France, Germany, The Netherlands[16] and even international organizations such as the European Union.[17] In these countries, foresight involves processing of information and imagining scenarios of possible futures. These scenarios serve as guideposts for planning and strategy formulation in the long term.

B. NCMF Situation Awareness Process

Based on the NCMF, the Situation Awareness process involves the following actions to be conducted in an interagency mode:[18]

1. **Detecting what is happening** is the process of scanning the environment for risks and vulnerabilities, as well as indicators of potential crisis. This stage involves interagency collaboration in scanning the environment. The process may also include civil society organizations (CSOs), subject matter experts, and even the general public.

2. **Analyzing what seems to be happening** is the stage when agencies make sense of the linkages between and among different variables and how they affect the agencies' internal and external environments. While the NCMCM provides a generic guide in pursuing this process, it encourages participating agencies to choose tools and make necessary modifications that fit their analytical needs.

3. **Interpreting what is happening** involves identification of the drivers and inhibitors of an emerging crisis in relation to participating agencies' organizational strengths, weaknesses, plans, and strategies. It is at this stage when participants are encouraged to identify (1) faulty understanding of issues and trends; (2) emerging areas where a crisis seems to be brewing but other agencies might have overlooked; (3) difficulties in agencies' pursuit of the national interests involved; (4) incompatibilities between agencies' plans/strategies and the emerging crisis; and (5) agencies' self-perception in relation to its environment.

4. **Determining how things can go** (scenario-building) is a process that creates scenarios or storylines in a narrative format. It involves a logical projection of how the identified drivers and inhibitors might play out in the long term. National interests affected are explicitly identified. A scenario also covers how one crisis can lead to a new or affect a pre-existing one. Importantly, a scenario explains how a crisis can complicate interagency cooperation.

5. **Preparing warning products** essentially sums up information and analysis from the earlier stages. Warning products are "comprehensive, reader-friendly, straightforward, relevant to the functions of end-users, and well-researched."

6. **Conveying warning** pertains to the delivery of warning products to national (strategic) and local (operational/tactical) decision-makers or crisis managers. These warning products serve as inputs integral to the crafting of contingency, crisis, and recovery plans.

C. The NCMF-based Warning Product

The final output of the NCMF Situation Awareness process is a strategic warning product that contains important information useful to national (strategic) and local (operational/tactical) decision-makers.

Information contained in a strategic warning product includes drivers and inhibitors of a potential crisis, indicators, and long-term scenarios. It also covers areas of interagency cooperation as well as those areas where possible interagency conflicts might occur. A warning product may also include a discussion on "wild cards" understood as "low probability, high impact events."[19] Lastly, a warning product puts forward recommendations for national and local decision-makers.[20]

Warning products serve an important purpose. They are inputs to the crafting of contingency (before a crisis), crisis action (close to or during a crisis), and recovery (after a crisis) plans. Warning products reduce uncertainties about the future and unpleasant shocks when a crisis occurs. They provide critical guideposts for national and local decision-makers and crisis managers in determining the scope of their crisis prevention measures. Prevention and mitigation measures become more deliberate and elaborate when informed by comprehensive and timely warning

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products.

III. Timeline: Government Actions amidst the Spread of Diseases (2012-2020)

The Philippine government had promulgated general policies and set up possible platforms for a routine and interagency Situation Awareness process as early as 2012. These are the following:

- EO No. 82 series of 2012 promulgated the NCMCM, which provides for an overarching national crisis management framework that includes the Situation Awareness (Predict) process.[21] It appoints the National Security Adviser (NSA) as the Chair of the Sub-Committee of National Crisis Management Committee (NCMC) in charge of the conduct of interagency horizon scanning and conveying strategic warnings. Furthermore, it assigns the Secretary of Health as the "Cabinet-Officer Primarily Responsible (C-OPR) for emerging and current threats to public health.

- EO No. 168 series of 2014 officially created the Interagency Task Force for the Management of Emerging Infectious Diseases (IATF-EID). EO No. 168 takes cognizance of the "emergence of the Severe Acute Respiratory Syndrome (SARS), Avian Influenza, Ebola, and the Middle East Respiratory Syndrome Coronavirus (MERS-CoV)" as potential public health emergencies of international concern.[22] The same EO also mentions the possibility of a "worldwide pandemic."[23] Part of the functions of the IATF-EID is to "submit to the Office of the President regular status reports of the EID Situation," which implies the need to undertake Situation Awareness Process on a regular basis.

It should be noted that the WHO has a publicly accessible database of confirmed reports of highly infectious diseases spreading in many countries since 1996.[24]

Table 1 juxtaposes government actions against what the NCMF Situation Awareness process prescribes. The year 2014 is an important year with respect to Situation Awareness for emerging infectious diseases because this is the year when the IATF-EID was officially established. The covered period extends until 30 January 2020, when the DOH officially confirmed the first positive case of COVID-19 in the country. As presented in Table 1, despite policies and potential platform since 2014, a routine interagency Situation Awareness process had not fully taken off in accordance with the NCMF prior to the COVID-19 outbreak.

IV. Gaps in Implementing the NCMF Situation Awareness Process

A cursory reading of what had transpired in the Situation Awareness (Predict) component of NCMF reveals a number of implementation gaps and missed opportunities.

A. Non-Implementation of NCMF Situation Awareness Process

In relation to emerging infectious diseases, the NCMF calls for the conduct of routine interagency Situation Awareness process led by the DOH and supported by the NSC Secretariat. To note, the Secretary of Health is tasked to be the Cabinet-Officer Primarily Responsible (C-OPR) for "**emerging** and current threats to public health."[25] (emphasis supplied) The functions of the C-OPR include "scanning for emerging threats and conveying strategic warnings; and undertake Situation Awareness processes at the strategic, operational and tactical levels."[26] Furthermore, the Department of Health chairs the IATF-EID, which could have served as a possible platform or enabling body for a routine interagency Situation Awareness process.

However, despite the general policies for crisis management, a routine interagency Situation Awareness process in accordance with NCMF procedures was not fully undertaken. As a result, no NCMF-based warning products were produced and widely disseminated to national and local decision-makers and stakeholders in relation to a possible pandemic scenario already mentioned in EO No. 168.

Warning products are intended to enrich the crafting of protocols, standard operating procedures (SOPs), and other policies by telling an elaborate story of how a scenario can unfold. Epidemic/pandemic scenarios may include possible

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Table 1: Infectious Diseases, Prescribed Situation Awareness Actions, and Actual Government Actions for the Period 2012-2020

Timeline of Global Health Events (by WHO)[1]	Interagency Situation Awareness Actions Prescribed in the NCMCM	Interagency Situation Awareness Actions taken by the Philippine Government
4 Sept 2012	Promulgation of the NCMCM through EO No. 82 series of 2012	
26 May 2014	Creation of the IATF-EID through EO No. 168 series of 2014 (Possibility of a "worldwide pandemic" raised.)	
2014 - 2019 Reported cases of Ebola, Avian Influenza, Zika Virus, Yellow Fever, MERS-CoV, and other infectious diseases across the globe	Routine Interagency Situation Awareness Process ("Predict" component) of the NCMF Production of early warning products about a pandemic scenario in the long term Dissemination of early warning products to national (strategic) and local (operational/tactical) decision-makers and stakeholders	No NCMF-based interagency warning products on long-term pandemic scenarios widely disseminated to national and local decision-makers and stakeholders
31 December 2019 Report of WHO about a cluster of pneumonia patients in Wuhan City caused by an unknown disease **8 January 2020** A new coronavirus—SARS-CoV-2—identified as the cause of the outbreak of the disease (COVID-19) **11-13 January 2020** Reported cases of COVID-19 in Japan and Thailand **14 January 2020** Reported possibility of human-to-human transmission of COVID-19	Intensified interagency Situation Awareness Process in relation to an unknown disease Quick production of warning products containing elements recommended in the NCMCM Quick dissemination of warning products to national (strategic) and local (operational/tactical) decision-makers and stakeholders Quick crafting of contingency, crisis action, and recovery plans (as part of Prevent and Prepare components)	**31 December 2019** Start of DOH's monitoring of developments regarding the yet unknown disease **28 January 2020** Convening of the first IATF-EID meeting and Issuance of IATF-EID Resolution Number 1
30 January 2020 First confirmed case of COVID-19 in the Philippines COVID-19 declared as a "public health emergency of international concern" by WHO	The confirmation of the first positive COVID-19 case (An "incident" in the language of NCMF) Start of the "Perform" component of the NCMF	**29 January 2020** Issuance of DOH Advisory Number 1

implementation of strict community quarantines, suspension of public transportation, strains in law enforcement, significant slump in economic activities, challenges to social welfare, pressure on the healthcare system, and overstretch of national and local government capacities, among others. A DOH-led interagency Situation Awareness process could have generated and disseminated such comprehensive warning products to national and local decision-makers.

Aside from the Secretary of Health, another important actor is the National Security Adviser (NSA) as the Chairperson of the Sub-committee of the NCMC. The Sub-committee is mandated to support the Predict component of the NCMF.[27] Under the supervision of the NSA—who is concurrently the Director General of the NSC Secretariat—is the Crisis Management Support Secretariat (CMSS). The CMSS is tasked to "maintain a database for all Inter-agency/department assessments, updates on Horizon Scanning methodologies" among others. The CMSS also has the function of "advocating inter-agency/department collaboration" as well as assisting "concerned staff of the C-OPR in validating, through inter-agency/department simulation exercises, the inter-agency/department contingency plans."[28]

The NSA, through the CMSS, had the opportunity of prompting and updating the member agencies of the NCMC Sub-Committee with respect to a routine interagency Situation Awareness process. Lamentably, the Predict component, as prescribed in the NCMCM, was not fully realized.

B. Lack of Quick, Comprehensive NCMF-based Warning Products in January 2020

The NCMF Situation Awareness process mandates the timely generation and dissemination of warning products **before** an incident occurs and a crisis develops. In the face of a fast-approaching crisis, a quick generation and dissemination of comprehensive and scenario-based warning products to national and local decision-makers is an essential action. This action did not take place in relation to COVID-19. There was no quick NCMF-based warning product issued by any government agency prior to the official announcement of an **incident,** i.e., the first confirmed case of COVID-19 in the country announced on 30 January 2020.

Written documents publicly issued by government bodies in the period between 31 December 2019 (WHO's announcement of the spread of an unknown disease in China) and 30 January 2020 (confirmation of the first confirmed COVID-19 case in the Philippines) provided advisories and protocols in relation to COVID-19. However, these announcements stopped short of conveying comprehensive scenarios and explicit recommendations for the crafting of contingency, crisis action, and recovery plans.

The DOH issued Department Memorandum No. 2020-0034 about "Interim Guidelines about the Preparedness and Response to Novel Coronavirus (2019-nCoV) from Wuhan, China (as of January 21, 2020)."[29] Detailed as it was, the said DOH Memorandum was nonetheless addressed only to an internal audience within the health sector. The guidelines were in the form of protocols. They were not advance and comprehensive warning about possible scenarios and areas of cooperation among different government agencies at the national and local levels. By NCMF standards, the DOH Memorandum did not qualify as a warning product.

Meanwhile, DOH Advisory Number 1 dated 29 January 2020 formally announced the convening of IATF-EID and the recommendations resulting from the first meeting of the IATF-EID the day before.[30] The Advisory was not in a form of a warning product. It did not include crucial elements of a warning such as long-term scenarios, areas of interagency cooperation, and policy recommendations for national (strategic) and local (operational/tactical) decision-makers and stakeholders.

At the interagency level, the IATF-EID issued Resolution Number 1 on 28 January 2020. It put forward "recommendations, to guide the management of nCoV situation." Recommendations include support to Filipinos in China, crafting of transportation and quarantine plans for Filipinos in Hubei province in China, restriction on issuance of visas for travelers coming from Hubei, and travel advisories discouraging non-essential travel of Filipinos to China.[31] The Resolution provided four (4) recommendations in response to an already fast-growing number of confirmed cases of COVID-19 in China and in other countries. It did not offer comprehensive scenarios, areas of interagency cooperation, and recommendations for the crafting

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of contingency, crisis action, and recovery plans. Therefore, the resolution did not constitute an interagency warning product as contemplated in the NCMCM.

On 30 January 2020, the DOH officially announced the first confirmed case of COVID-19 in the Philippines.[32] In accordance with NCMCM, such confirmation is considered an "incident," which then triggers the "Perform" component of the national crisis management framework. The Predict component (Situation Awareness process) of the NCMF is intended to imagine a crisis and sufficiently warn national and local decision-makers about it *before* an incident occurs.[33] Hence, from the perspective of NCMCM, the opportunity to provide an early comprehensive warning about a fast-approaching crisis expired on January 30.

V.   Recommendations for Improving the Implementation of the NCMF

There are possible executive actions that can be considered in light of the aforementioned implementation gaps.

A.   Conduct of NCMF Audit

Building on EO No. 82 series of 2012, the President or the Executive Secretary may issue a memorandum or any other form of written instruction to authorize the conduct of an audit on the implementation of the NCMF. An audit will assess why the NCMF had not been fully utilized prior to the COVID-19 pandemic outbreak. The audit offers the prospect of discovering possible misalignments in interagency protocols, culture of cooperation, agency doctrines, and scope of visioning and planning.

An audit should take note of policies that designated cabinet-officers primarily responsible (C-OPR) on specific issue areas, including threats to public health, economy, energy supply, migration, and national security. The NCMF provides that a C-OPR has a leadership role in the 5Ps Framework of the NCMF, which includes Situation Awareness.[34] An audit can help assist C-OPRs in operationalizing the interagency Predict component, alongside other components, of the NCMF.

That the Chairperson of IATF-EID (per EO No. 168 of 2014) is also the C-OPR for emerging and current threats to public health (per EO No. 82 of 2012 and NCMF) speaks volumes about the indispensable role of the DOH in leading the routine interagency Situation Awareness process. An audit should help explore ways to capacitate the Department of Health for NCMF implementation.

An NCMF audit can also help better equip the National Security Adviser (NSA), through the Crisis Management Support Secretariat (CMSS), in implementing Section 5 of EO No. 82. Section 5 enumerates the NSA's responsibilities: (1) dissemination of the NCMCM to national and local decision-makers, (2) training on Situation Awareness process, and (3) the conduct of simulation exercises.

B.   Crafting of a Template Warning Product

The slim window of opportunity from the time when WHO officially reported the spread of the then unknown disease in China (31 December 2019) up to the time when the DOH reported the first confirmed case in the country (30 January 2020) demonstrated the need for a template warning product. Given the fast spread of infectious diseases, such template plays a crucial role in promptly alerting national and local stakeholders.

Crafting a template for a quick interagency warning product that is based on the NCMF is crucial in putting together a comprehensive and scenario-heavy alert in the face of a fast-approaching crisis.

The NCMF recommends elements for a template warning product. Such template may include, but is not limited to, scenarios, areas of cooperation and conflict among government agencies, and policy recommendations.[35] Templates of warning products that sufficiently cover such elements can serve as instructive inputs to the crafting of contingency, crisis action, and recovery plans by national and local decision-makers.

Per NCMCM, the CMSS may initiate the crafting of such templates in coordination with C-OPRs. The CMSS may build on its already robust interagency experiences in this regard.

C.   Development of Protocol for Warning Dissemination

A ready protocol for warning dissemination prepares agencies for quick and deliberate delivery of warning products. A protocol readily identifies

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who the recipients at the national and local levels are. It can also cover means and sequence of dissemination. A clear protocol for warning dissemination is particularly useful when an incident is about to occur or a crisis is already fast approaching.

In line with the NCMF, protocols can already be established by the NSA and the C-OPRs for a quick dissemination of warning products to target national and local decision-makers and stakeholders. It must be ensured that such protocols are in harmony with prevailing internal SOPs of concerned agencies for easier implementation.

VI.   Conclusion

This paper argued that the interagency Situation Awareness process outlined in the NCMCM had not been fully implemented before the outbreak of COVID-19 in the country. The paper demonstrated that despite prevailing policies promulgated in 2012 and 2014, NCMF Situation Awareness was not executed in full accordance with the provisions of NCMCM. No NCMF-based early warning products on pandemic scenarios intended for both national and local stakeholders were disseminated. The paper also offered recommendations on possible executive actions in order to improve the implementation of the NCMF Situation Awareness.

The Situation Awareness (Predict) component of the NCMF is paramount in preparing for the emergence of infectious diseases such as COVID-19. It aids crisis managers in coming up with an educated projection of how an epidemic or a pandemic might unfold. By providing comprehensive and long-term scenarios, among others, the interagency Situation Awareness invites our attention to vulnerabilities in our society and gaps in our capabilities. As an early warning mechanism, Situation Awareness affords crisis managers at the national and local levels more time to learn about the nature and imagine the dynamics of a problem, invest in needed capabilities, craft protocols, rehearse responses, and plan for swift recovery.

Institutionalization of systems and processes is central in promoting certainty and regularity, most especially in the face of limited time and resources. Institutionalized systems and processes offer a

sense of order and clarity, thereby reducing vulnerabilities and saving more lives.

# # #

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[2] "Declaring a State of Calamity Throughout the Philippines due to Corona Virus Disease 2019," Proclamation No. 929 series of 2020 Section 1.
[3] Executive Order (EO) No. 82 series of 2012 Section 1.
[4] Ibid, 2nd Whereas.
[5] *National Crisis Management Core Manual*, op. cit., 12.
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[7] Tuomo Kuosa, "What is Foresight?," in *Practicing Strategic Foresight in Government*, (Singapore: S. Rajaratnam School of International Studies, 2011), 9.
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[14] Ibid, 42.
[15] Tuomo Kuosa, op cit, 47-48.
[16] Ibid, 57-64.
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[34] Ibid, 28.
[35] *National Crisis Management Core Manual*, op. cit., 114-115.