Journal of Infrastructure, Policy and Development 2024, 8(15), 9114.
https://doi.org/10.24294/jipd9114

Article

Regional head leadership model in mitigating climate change in Papua

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CITATION

Fitriani, Tjilen AP, Betaubun M, Suhendra FA. (2024). Regional head leadership model in mitigating climate change in Papua. Journal of Infrastructure, Policy and Development. 8(15): 9114. https://doi.org/10.24294/jipd9114

ARTICLE INFO

Received: 12 September 2024
Accepted: 11 November 2024
Available online: 12 December 2024

Abstract: This research aims to build an appropriate leadership model for regional heads in mitigating disasters due to climate change that is occurring in Papua. Papua Island is one of the islands that is included in disaster-prone areas, namely earthquakes, flash floods, tidal floods and landslides. This disaster occurred due to Papua's geological conditions in the form of activity on the Indo-Australian plate (southern part) and the Pacific plate (north-eastern part). Exploitation of nature carried out by companies and communities themselves in a particular area has an impact on the balance of the natural ecosystem. So far, disaster management has only focused on emergency response. Aid movements coordinated by ordinary people also focus more on raising aid for emergency situations. In fact, comprehensive disaster management includes before, during and after a disaster occurs. So a combination of leadership styles is needed that must be carried out at each phase of a disaster so that the right model can be produced. The results of this research found that the leadership model of regional heads in mitigating climate change in Papua is in accordance with the disaster management cycle with leadership styles, and traditional Papuan leadership styles. This combination is called a collaborative leadership model for disaster management in Papua. It is hoped that by implementing this model, climate change disaster mitigation can be effective.

Keywords: leadership; mitigating; climate change; Papua

1. Introduction

Disasters occur when unexpected and of course cause a lot of great damage that requires fast, precise and accurate handling. According to Neira and Lic (2004) disaster management is carried out abnormal situations and full of technical, psychological and ethical problems. During a disaster, an integrated and systematic response movement initiative is needed. The ideal leader handling must have a sense of leadership, is able to show and apply appropriate leadership in disaster operations in the field. According to Podsakoff (1990) ability of leaders is to recognize the time and need to make changes, identify the direction of change, communicate change strategies to people in the organization, especially those who support change and empower them to make changes and facilitate efforts to achieve change goals. According to Carter (1992), there are several important reasons why leadership is importan in disaster management, namely: a. During a disaster, a leader must has qualities and skills, b. A disaster situation invites various parties to become resources, this situatioan need affirmation from a leader to position each of these resources, c. in a disaster situation needs a leader who understands the direction of change and has the ability to manage each of these changes is needed.

During a disaster, leaders must be able to clear picture of the direction and objectives of disaster management quickly, precisely and accurately. The main

variables in leadership are vision and commitment (Steers, 1996), the vision of the leader in disaster management it will be communicated to all stakeholders so that they can garner commitment from various parties in order to realize it. Efforts to raise commitments can be made through transformational, transactional and non-transactional (laissez-faire) approaches. These three approaches effectiveness for different situations (Rubin, 2005), the strategy undertaken to support these three approaches is to become a role-model, making promises and using power.

Papua Province is the eastern part of Indonesia which is not immune from potential disasters. Based on InaRisk, a GIS server-based online disaster risk assessment information system, the National Disaster Management Agency (BNPB), mapped 29 regencies in the province with up to 3 million lives exposed to moderate and high threats, such as the threat of earthquakes, tsunamis, extreme weather, floods, landslides, and droughts. The area known as the Cenderwasih animal has a moderate to high level of multi-threat disaster with an area of 30 million hectares. These various threats encourage the seriousness of local governments in pursuing disaster risk reduction (DRR) and require multi-stakeholder synergy.

Geographically, Papua Island is located on the Pacific Rim of Fire, namely the area around the Pacific Ocean which is at risk of experiencing natural disasters such as volcanic eruptions and earthquakes. Unlike the country of Papua New Guinea which has 14 active volcanoes and 22 passive volcanoes, there are no volcanoes in Indonesia. Meanwhile, earthquakes with quite large magnitudes often occur in both regions which have an impact on the Papua region, such as tsunamis recorded in the city of Jayapura in 1941, 1952, 1957 and 1970. Historically, there have been several large earthquakes that occurred in the Papua region, namely in 1926 amounting to 7.6 Mw in the northern part of Papua with more than 50,000 victims, then in 1976 it was 7.1 Mw with victims reaching 422 people, including 70 people due to landslides that accompanied the earthquake. In 1981, with a strength of 6.8 Mw, it caused the loss of 300 people and in 1989, a strength of 6.0 Mw caused the loss of 120 people and the Biak Fault on the Indo-Australian Fault in 1996 was 8.2 Mw with the loss of 108 people and the loss of 58 people, where the earthquake which resulted in a tsunami also had an impact. the earthquake and tsunami occurred in Manokwari. In 2002 it was 7.6 Mw which had an impact on the Papua region. Then in 2004 there was an earthquake in the Nabire area with a magnitude of 7 Mw followed by earthquakes of 7.3 Mw and 6.7 Mw. Apart from that in Yapen in 1996, 1947 and 1941 with an earthquake with a strength of >7 Mw, then in 2009 it occurred earthquakes with a strength of 7.4 Mw and 7.7 Mw then in 2010, 2013 and 2015 there were earthquakes with a strength of 7 Mw. This shows that the Papua region is very vulnerable to earthquakes with a large risk. Apart from earthquakes and tsunamis and landslides, the Papua region is also prone to the danger of drought which can cause forest fires, such as those that occurred in 1997–1998 and 2015–2016 in the Southern Papua region, where in 2015 there were a total of 584 fire hotspots spread across 246 in Merauke district and 117 in Mappi district. Apart from that, the Papua region is prone to extreme weather which causes floods. Two flash floods were recorded which resulted in fatalities, namely 2010 in Wasior and 2019 in Jayapura district. Meanwhile, buttresses that cause flooding almost occur in several areas, including tidal floods in coastal areas. In 2008 the Papua region was divided

into 2 provinces, namely Papua Province and West Papua Province. If we look at the disaster events for the last 10 years, Papua Province (when there were still 29 cities/districts) experienced 201 disasters. Apart from regional natural disasters Papua also experiences non-natural disasters such as pandemics and social disasters such as riots. Then in 2022 Papua will again be expanded with the addition of 3 new provinces, namely Central Papua, Mountain Papua and South Papua, while the main Papua Province only has 9 district cities remaining for the Tabi and Saereri traditional areas.

Based on the 2021 Disaster Risk Index (IRBI) report, the northern region of Papua Island, namely Jayapura, Papua Province is in 10th position as the region with the highest disaster risk index, throughout 2009–2019 according to the National Disaster Management Agency's Indonesian Disaster Information Data (DIBI). (BNPB) flood and landslide disasters occurred most frequently, namely 116 disasters (68 landslides, 23 tidal waves and 3 abrasions, 9 extreme weather events, 1 drought, 11 earthquakes and 1 tsunami). incident). The victims of this disaster were 207 fatalities, 106 missing, 1562 injured, and 31,554 displaced, so on average for every natural disaster, 270 people will be affected.

Climate change is one of the factors contributing to the disaster in Papua. However, there are several other causes that influence the disaster in Papua, namely:

1) Climate Change

a) Increase in Rainfall and Storm Intensity: Climate change causes changes in rainfall patterns, which results in increased intensity of rain and storms in Papua. This triggers floods, landslides and even flash floods, as happened in Sentani in 2019.

b) Rising Temperatures and Seasonal Changes: Higher temperatures cause changes in ecosystems in mountainous and coastal areas, which affect water availability and slope stability.

2) Geographic and Topographic Vulnerability

a) Steep and Steep Terrain: Papua has a topography dominated by mountains and steep valleys. These slopes are prone to landslides, especially during heavy rains or after erosion due to human activities.

b) Coastal Areas that are Vulnerable to Sea Level Rise: Papua's coastal areas, especially seaside settlements, are vulnerable to experiencing the impacts of sea level rise triggered by global climate change.

3) Exploitation of Forests and Natural Resources

a) Illegal Logging and Deforestation: The loss of natural forests in Papua, both due to illegal logging and industrial activities, reduces the soil's ability to absorb water and resist erosion. This increases the risk of floods and landslides.

b) Mining and Industrial Activities: Mining activities in certain areas also increase environmental damage affecting the carrying capacity of the soil. Mining that does not pay attention to environmental management can trigger land damage.

4) Ecosystem Changes and Local Wisdom

a) Declining Use of Local Wisdom: Several local wisdom practices that were previously used to maintain the balance of nature are now starting to be abandoned. These changes, which are often caused by economic factors or modernization, also increase risks to the environment.

b) Migration and Changes in Settlement Patterns: Migration to certain vulnerable areas, such as steep slopes or river basins, increases the risk of disasters. This happens because residential development does not take environmental risks into account.

5) Limited Infrastructure and Disaster Management Preparedness

In several areas in Papua, limited infrastructure and access to disaster mitigation tools hamper preparation and response to disasters. This makes local communities more vulnerable to the impacts of disasters, both from climate change and other factors.

Climate change is one contributing factor, especially related to changes in weather patterns and rising sea levels. However, local factors such as geographic conditions, exploitation of natural resources, ecosystem changes, and limited disaster management preparedness also play a major role in triggering and exacerbating disasters in Papua.

This disaster management is carried out by the authorized agencies, namely the Search and Relief Agency (Basarnas) and the Regional Disaster Management Agency (BPBD). Currently the SAR Offices and Posts in the Papua region consist of the Jayapura SAR Office (Class A), the Merauke SAR Office (Class B), the Timika SAR Office (Class B), the Manokwari SAR Office (Class B), the Merauke SAR Office (Class B), SAR Post (Raja Ampat, Nabire, Serui, Fak-Fak, Wamena, Sarmi, Bintang Mountains, Agats, Kaimana, Boven Digoel). Meanwhile, for regional BPBD offices in the Papua region, their formation depends on regional policies and the level of disaster risk in each region. Currently, BPBD offices are spread across the Papua region, namely in Jayapura, Mimika, Nabire, Merauke, Manokwari, Sorong and Raja Ampat. In total, 14 SAR offices or posts and 7 BPBD offices have to handle quite a lot of disasters due to climate change, where the Papua region has an area of 418,707.7 km^2 and a population of 1.09 million people, so this is a very difficult thing to do if not have leaders who can apply a collaborative leadership model that can synergize all elements or institutions in the region and the community in handling disasters in the Papua region. This research aims to find the appropriate leadership model for regional heads in mitigating climate change in Papua, taking into account geographical conditions, population, and limited conditions of authorized agencies regarding disaster events. Based on these conditions, a leader is needed who can implement the right leadership style or leadership approach so that all parties can synergize in handling disasters in Papua.

2. Materials and methods

The approach used is a qualitative approach. The research was conducted in Papua. The discussion of this research refers to a problem formulation that focuses on the appropriate regional head leadership model in mitigating disasters due to climate change that is occurring in Papua. The analytical method used is a qualitative research method supported by primary and secondary data. This research uses qualitative descriptive research, which aims to find the leadership model of regional heads in mitigating climate change in Papua. Where researchers conducted in-depth observations and interviews with community leaders, several regional heads and

heads of related agencies who have the authority to handle disaster events in Papua, by looking at how the management cycle is carried out by regional leaders in synergy with related agencies that handle disasters (Basarnas and BPBD). The data analysis technique used is thematic analysis (data reduction, data display, drawing conclusions). This method is expected to be able to find and describe the appropriate leadership model for regional heads in mitigating climate change in Papua.

3. Results and discussion

Disaster risk is related to two important factors. First, related to the level of vulnerability of a society in anticipating, preparing, responding and recovering. The second factor is related to the risk of disasters occurring in the area (Maarif, 2012). Another factor is leadership. Leadership can be translated as formal and structural leadership, as well as informal and cultural leadership (Aedah 2017; Audah 2019; Faturahman 2018; Mulianingsih 2020). Leaders in disaster situations are required to be brave in making decisions so they can act quickly and appropriately. Apart from that, wisdom is also needed in deciding the policies to be adopted, as well as sensitivity in responding to situations that occur without having to be burdened with binding procedural matters. Speed is needed in coordinating the various agencies, institutions and social organizations involved to get the right action targets. It takes courage to make decisions quickly (Maarif, 2012). Talking about leaders and strategic leadership, it is closely related to the quality of human resources this nation has (Abrori and Muali 2020; Indrawan 2018; Kumendong et al. 2019). This nation still needs strong leaders in various sectors of public life, leaders who have national insight in facing complex national problems. An integrative leader and leadership must have the mindset, attitude patterns and action patterns of a statesman and have certain advantages as a leader (Luwis, 2020; Saifullah, 2020).

3.1. Disaster management cycle

Carter (1992) suggested the existence of a disaster management cycle. Consists of several stages of a disaster, namely (1) disaster impact, (2) recovery and development (response, rehabilitation, reconstruction, prevention), (3) mitigation, and (4) preparedness. Each phase of disaster management or management requires a different type of leadership. The need for different types of leadership is not driven by the availability of leaders with certain styles, but by the need to achieve the goals of each particular stage in disaster management. The disaster phase (disaster impact) requires a coercive leadership style, where this style requires subordinates to fulfill the leader's requests to realize his vision. In a critical situation, everyone demands clear direction in an effort to get out of the situation. The recovery and development phase, especially the response phase, requires an authoritative leadership style, where this style will accommodate the mobilization process and convince many parties to participate in the disaster management process. The recovery phase requires an affiliative type of leadership where the leader can create harmony and build emotional bonds between the various parties involved in the recovery process. The development stage requires a democratic leadership style where the leader requires various input from various parties but with the same goal. If there is a

difference of opinion, a democratic leader is able to accommodate every opinion and is able to summarize it into an agreement that satisfies the various parties.

The prevention and mitigation phase, which aims to set disaster management standards and seeks to reduce the impact of unavoidable disasters, requires a pace-setting type of leadership that will set high standards for specific performance. This type is suitable to be applied to get fast results from a highly motivated and competent group. The preparedness phase requires a type of coaching leadership where the leader can provide a long-term vision and has the ability to convince everyone that disasters can happen anytime and anywhere. (see **Figure 1**).

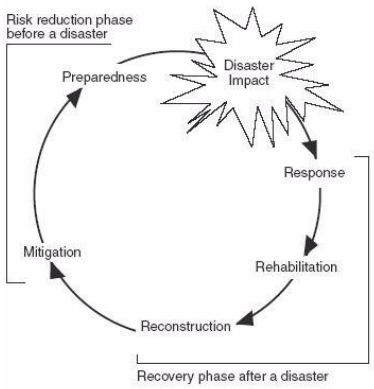

Figure 1. Disaster management cycle.

The results of interviews found that the disaster management cycle used by local governments, Basarnas and BPBD follows a disaster management framework which consists of 4 main stages, namely:

1) Mitigation

This stage Basarnas and BPBD collaborate with local governments and the community to identify potential dangers, carry out risk analysis and build safe infrastructure. Which aims to reduce the risk and impact of disasters before disasters occur. The activity that has been carried out is socialization about the dangers of disasters.

2) Preparedness

This stage of Basarnas and BPBD is in the form of disaster management training and simulations, preparing equipment, preparing evacuation plans, and educating the public about the actions that need to be taken when a disaster occurs. With the aim of preparing all the resources needed to be ready to face disasters. Activities that have been carried out include training emergency response teams, ensuring logistical readiness, and carrying out disaster simulations with the community and related agencies.

3) Emergency Response

At this stage, Basarnas carries out search and rescue of victims (SAR), evacuation of residents, management of refugee posts, and BPBD distributes logistical aid such as food, water and medicine. With the aim of providing a rapid response to save lives, reduce the impact of damage, and provide emergency assistance. At this stage, Basarnas' role is to focus on SAR operations, especially in

life-saving missions, and BPBD's role is to coordinate aid with other institutions, monitor the situation at refugee posts, and distribute aid.

4) Recovery

In this stage, Basarnas and BPBD are reconstructing damaged buildings, restoring infrastructure, as well as psychosocial support for the victims. With the aim of restoring the condition of communities and the environment affected by disasters, both physically and psychologically. Basarnas' role decreases at this stage, and they return to preparedness functions, while BPBD's role is to ensure that recovery runs smoothly, collaborate with other institutions for reconstruction, and prepare disaster management evaluation reports.

From the description of the interview answers conducted above, it can be seen that this cycle follows the disaster management cycle according to Carter (1992), and each stage is interrelated and the experience of disasters that have occurred influences the readiness and mitigation policies for the next disaster.

3.2. Leadership model

All types of leadership are good and valid, depending on the situation at hand. In disaster and post-disaster crisis situations that require quick decision making, the appropriate type of leadership is collaborative, because collaborative leadership is a practical and effective way to overcome complex problems and challenges (Wilson, 2013). Collaborative leadership is required to be able to manage cultural differences, experiences and skills that exist within the organization, so leaders need to invest time to manage them, be ready to handle conflict constructively and most importantly be able to share control (Archer and Cameron, 2013), investigate but not judge and accept other people's criticism (Raelin, 2006).

Disasters occur when they are least expected and of course cause a lot of major damage which requires fast, precise and accurate handling. According to Neira and Lic (2004) disaster management is carried out in abnormal situations and is full of technical, psychological and ethical problems. During a disaster, an integrated and systematic response movement initiative is needed. Ideal handling is if there is a leader who has a sense of leadership, is able to show and apply appropriate leadership in disaster operations in the field. Several important reasons why leadership is the main pillar in disaster management, namely (a) During a disaster a leader is needed who has leadership qualities and skills, not just a formal leader, (b) Disaster situations invite various parties to become resources and play a broad role , therefore, confirmation is needed from a leader to position each of these resources, and (c) The situation during a disaster changes quickly, so a leader is needed who understands the direction of change and has the ability to manage each change.

The application of collaborative leadership was emphasized by the Deputy for Energy Development and Search and Rescue Potential at Basarnas, Dr Abdul Haris Achadi, SH, DESS, who said that collaboration is very important in search and rescue (SAR) operations in disasters, to achieve this. This means that collaborative leadership is absolutely necessary (Hidayatullah Da'wah Center Building, Jakarta 28/1/2022). So collaborative leadership is really needed to be implemented by leaders in regional governments, BPBD and the Basarnas Office because apart from

leading their own teams, leaders must also be able to collaborate with other teams from outside the scope of their organization which are related to the type of disaster that occurs. This is of course done to support maximum implementation of the main tasks and functions of the Search and Relief Office.

From the results of the interviews conducted, the problems found in the regional government, Basarnas Office and BPBD were (1) the role of leaders in fulfilling the main tasks and functions of the organization is not yet optimal, (2) the lack of quantity of human resources available to support the role of the main tasks and functions. organization, (3) the breadth of the handling area, and (4) Current leaders are not yet optimal in understanding the power possessed by all parties involved, Share Information, democratic, facilitate all parties involved in decision making, and provide opportunities to develop roles and responsibilities all parties involved.

Papuan Traditional Leadership

Traditional leadership in Papua has an important role in disaster mitigation, especially because indigenous people in Papua have strong ties to their land, nature and environment. Based on the results of interviews conducted with Papuan community leaders, it is stated that this traditional leadership plays a role as a liaison between the government and local communities, as well as as a guardian of traditional values and local wisdom that supports disaster mitigation efforts. The following are some of the main roles of traditional Papuan leadership in disaster mitigation:

1) Keeper of Local Wisdom and Environmental Knowledge

a) Local Wisdom: Traditional leaders in Papua, such as tribal chiefs and traditional leaders, have local knowledge passed down from generation to generation regarding natural signs, weather patterns and potential disaster risks in their region. For example, they understand natural signs that may indicate danger such as floods or landslides.

b) Local Ecological Knowledge: They often know the local ecosystem and understand practices that can maintain environmental stability. This wisdom is very useful in identifying risks and providing early warning to local communities.

2) Disaster Mitigation Socialization and Education Drive

a) Community Education: Traditional leaders play a major role in disseminating knowledge and practices of disaster mitigation to the community. Because Papuan indigenous people often have more trust in traditional leaders, messages regarding disaster preparedness and mitigation measures are more effective if conveyed through traditional leaders.

b) Information Disseminators: They can act as intermediaries who convey important information from the government or related institutions regarding disaster risks, evacuation guidelines and preventive measures to the public.

3) Mediator between the Government and Indigenous Peoples

a) Cultural Bridge: Traditional leaders help bridge the cultural gap between indigenous peoples and the government, who often come from outside Papua. This role is very important to ensure that the mitigation program designed by the government is acceptable to indigenous communities by considering local values.

b) Environmental Advocacy: Traditional leadership can be the voice of the community in demanding sustainable environmental and disaster mitigation policies that respect local culture, for example in avoiding development that damages the surrounding environment.

4) Protecting Traditional Areas and Preventing Natural Exploitation

a) Preventing Environmental Damage: Traditional leaders often have the authority to monitor and protect customary areas from activities that could damage the environment, such as illegal logging or illegal mining, which can increase the risk of disasters.

b) Protection of Customary Ecosystems: They also regulate spatial planning according to custom, so that the environment is maintained. For example, in some areas, there are customary rules that prohibit cutting down trees in certain areas or clearing land in areas that are considered vulnerable.

5) Leader in Emergency Action and Post-Disaster Reconstruction

a) Traditional Evacuation Coordinator: Traditional leaders can organize communities to carry out evacuation actions when a disaster occurs, especially in remote areas that are difficult for external rescue teams to reach.

b) Social and Psychological Recovery: Traditional leaders play a role in restoring the social and psychological condition of the community after a disaster, as well as ensuring that traditional values and mutual cooperation are maintained in the reconstruction process.

6) Awareness Builder for Nature-Based Recovery

a) Utilization of Technology and Local Knowledge: Traditional leaders promote nature-based practices, such as forest conservation and the use of local, environmentally friendly materials, as a form of adaptation and mitigation to climate change and disaster risk.

b) Maintenance of Vital Ecosystems: They often promote the protection of important areas, such as mangroves, rivers, or swamps, which naturally help reduce the impact of disasters such as floods and landslides.

So, based on statements from Papuan community leaders, it can be concluded that the role of traditional leadership in Papua in disaster mitigation is very significant because they not only maintain the balance of nature and culture, but also help in socialization, environmental protection and emergency measures. Integrating traditional leadership roles with government mitigation policies can increase the preparedness and resilience of the Papuan people to disasters.

4. Discussion

These various types of leadership are not necessarily owned by one person. Each type has different attributes and requires emotional intelligence (Goleman, 2000). Therefore, it is necessary to develop a collaborative leadership system that can accommodate various types of leadership from various individuals. Each individual will complement each other according to their strengths, thereby increasing the effectiveness of each stage of disaster management that has been planned. A shared leadership system requires an understanding of the shared vision of each individual representing the stakeholders. The more stakeholders there are,

the more varied the visions that may emerge. Therefore, many requirements are needed to develop this collaborative leadership system.

Disaster (abnormal) events that occur are definitely unexpected and cause damage beyond expectations, of course this requires fast, precise and accurate handling and is accompanied by technical, psychological and ethical problems (Neira and Lic, 2004). The ideal handling characteristic is to have a leader who has leadership who is able to apply his leadership model dynamically in operations in the field.

All types of leadership are good and valid, depending on the situation at hand. In disaster and post-disaster crisis situations that require quick decision making. The picture is this, in the post-disaster period an assertive leadership type may be more appropriate, but in a situation of developing a disaster preparedness process, consultative or facilitative leadership is more appropriate. Consultative leadership is a type of leader who does not make decisions alone but involves the members he leads in a consultative manner. This consultative leadership provides sufficient space for members to provide considerations, but in the end it is the leader who makes the decision. Facilitative leadership is leadership that provides the widest possible space for members to participate in determining joint goals and decisions to achieve these common goals. Modern leadership (currently) emphasizes the importance of a facilitative style compared to an authoritarian style.

A regional head is a leader who has the leadership ability to recognize the time and need to make changes, identify the direction of change, communicate change strategies to people in the organization, especially those who support change and empower them to make changes and facilitate efforts to achieve change goals. (Pudsakoff, 1990). The essence of leadership during a disaster is to provide a clear picture of the direction and objectives of disaster management, and on the other hand, it is hoped that they will be able to provide an explanation of the importance of fast, precise and accurate management.

The criteria for a leader in disaster management (Pencheon, 2000) are (1) having a clear and systematic vision, (2) having sufficient enthusiasm and energy to carry out the leadership process, (3) having self-confidence and the ability to trust others, (4) have the charisma of a leader, (5) always study and train or apply leadership. The success of a leader lies in his reliability in applying a certain leadership style at the right time with specific conditions. The most difficult thing is finding the right momentum to apply each of these styles in each phase of the disaster management cycle which continues to change dynamically. According to Goleman (2000), the model for the appropriateness of implementing leadership style is as follows (see **Table 1**):

According to Carter (1992) the disaster management cycle consists of 4 phases (disaster impact, recovery and development, mitigation and preparedness). Where each phase has been matched to the conditions faced, namely:

1) the impact of the disaster applies a coercive leadership style;
2) the response is applied in an authoritative style;
3) recovery is implemented in an affiliative style;
4) development is implemented in a democratic style;
5) prevention and mitigation are implemented with a pace-setting leadership style;

6) preparedness is applied in a coaching leadership style.

Table 1. The model for the appropriateness of implementing leadership style (Goleman, 2000).

Style	Application
Coercive leaders demand immediate compliance	Useful to lead people out of a sinkingship
Authoritative leaders mobilise people towards a vision	Useful wheb an important change is required
Affiliative leaders create buil consensus through participation	Useful ti bind teams in difficult times
Democratic leaders build consensus through participation	Useful to encourage input from valuable team members
Pace setting leaders expect excellence and self direction	Useful to get quick resukt from a good team
Coaching leaders develop people for the future	Useful for long term development of key members of team

The various styles or types of leadership above may not all be owned by one leader, because each type requires a fairly wide range of emotional intelligence (Goleman, 2000). So a shared or collaborative leadership system or model is needed that can accommodate all types of leadership from various individuals. Each individual complements each other according to their strengths so that they can increase the effectiveness of each phase of the disaster that has been planned. A collaborative leadership system or model requires an understanding of the vision of each individual (agency leader).

Traditional leadership in Papua consists of several types, namely (1) authoritative male leadership type, (2) tribal chief/ondoafi leadership type, (3) king leadership, and (4) mixed leadership system (Mansoben, 1995).

The Concept of an Authoritative Man/Big Man The concept of an authoritative man or big man comes from a free translation of local terms used by local residents to refer to important people in their own community. The concept of an authoritative person is used for a form or type of political leadership that is characterized by authority based on a person's personal ability to allocate and reallocate resources that are important to the public (Sahlins, 1963). Strathern in Mensoben (1995) suggests that there are two arenas used to seize an authoritative human position, namely internal relations and external relations. Types of Authoritative Male Leaders In the social organization system there are several leadership systems, including the following: a. Authoritative Male Leaders Based on Entrepreneurial Ability Barth revealed that the actions of an authoritative male leader can be likened to entrepreneurship or entrepreneurship, so that he can collect certain resources and manipulate people to achieve goals in the form of wealth, position and prestige. Soeprapto (2013) revealed that authoritative male leadership based on the ability to trade (big man trade) is found in the Me, Muyu and Maybrat communities. B. Authoritative Male Leaders Based on the Ability to Lead War Soeprapto (2013) explained that the leadership role of authoritative men based on the ability to fight (big man war) emerged because certain tribes supported this system as the focus of

their culture, so that certain communities emerged with people who have the courage to emerge as a leader.

Main Leadership System/Ondoafi Soeprapto (2013) revealed that the Ondoafi leadership system is a system of inherited political power. Bonefasius (2012) explains that the Ondoafi leadership has strong capital to manage for the benefit of itself and society. This power capital includes social capital, symbolic capital and material capital. In principle, all positions in the Ondoafi leadership system, whether at the small clan, village or confederation level, are lifetime positions and are inherited patrilineally. According to customary provisions, the leadership transition process occurs if an official can no longer carry out his duties because he dies, or because he does not carry out his obligations properly or violates customary norms (Mensoben, 1995).

King's Leadership System King's leadership was the system adopted by the Tidore kingdom, which at that time ruled the Raja Ampat Islands. This system rewards a king based on lineage. The authority and authority of a king in the past was very great, this was reflected in the obedience shown by his people to the decisions and regulations issued by the king. In the king's leadership there is a clear organizational structure and a clear division of work based on the parts of that structure. System

Mixed Leadership Soeprapto (2013) revealed that a mixed leadership system is a type of leadership that emerges from individuals who appear as leaders on the basis of their own abilities, or on the basis of heredity. The mixed type is between the authoritative male leadership type, the king leadership type, and the clan leadership type. Leadership like this is found in the Papua region, including tribes in the Cenderawasih Bay area such as in Biak, Yapen and Waropen. Mansoben (1995) explains that the main characteristics that are used as the main criteria in mixed leadership are the nature of inheritance of leadership positions found in the king and ondoafi leadership systems, as well as the nature of achieving leadership positions found in authoritative men. leadership system.

Based on observations, secondary data and the results of interviews conducted, the leadership model of regional heads in mitigating climate change in Papua still refers to the suitability of the leadership style with the disaster management cycle according to Carter (1992), which is combined with traditional Papuan leadership types (Mansoben, 1995), so the model is appropriate in Papua are as follows (see **Table 2**):

Table 2. Collaboration leadership in disaster management in Papua (Carter 1992, Goleman 2000, Mansoben 1995).

No	Disaster Management Cycle (Carter, 1992)	Leadership Style (Goleman, 2000)	Leadership Style (Mansoben, 1995)
1	Disaster Impact	coercive	Big man
2	Respone	authoritative	Ondoafi
3	Recovery	affiliative	Royal
4	Development	democrative	
5	Prevention and Mitigation	democrative	Mixed
6	Preparedness	coaching	
Collaborative Leadership In Disaster Management In Papua			

Below is an illustration of the leadership model of regional heads in climate change mitigation that can be applied in Papua, namely Collaborative Leadership for Disaster Management in Papua (see **Figure 2**):

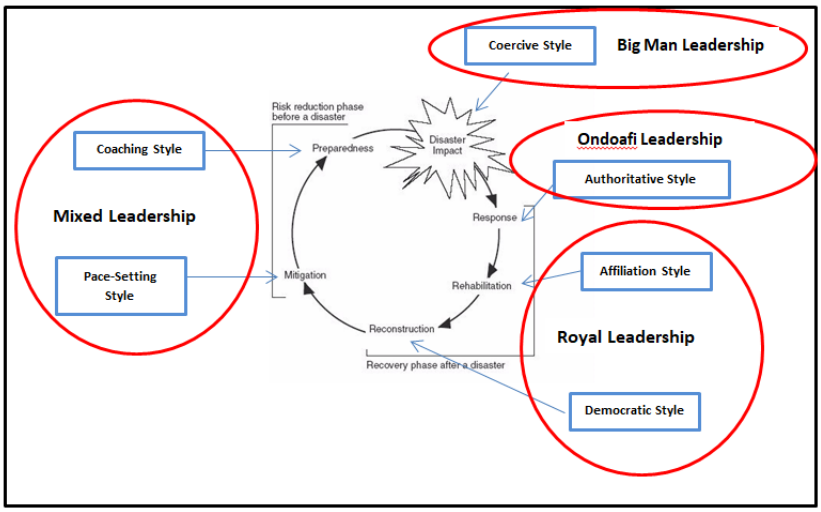

Figure 2. Regional head leadership model in migigating climate change in Papua.

5. Conclusion

The Head of Leadership Model of leadership during disaster management is absolutely necessary to support the effectiveness and achievement of this management. Critical situations, fraught with uncertainty, system malfunctions, and lack of resources, further emphasize the need for effective leadership. Disaster management can be divided into several stages, where each stage has certain characteristics but supports each other sequentially (disaster management cycle). Each stage of disaster management will involve many parties who may be involved in only one stage or all stages. The parties involved also have different missions and competencies.

The type of leadership in disaster management can be adjusted to the stages of disaster management. The aim of this adjustment is to increase the effectiveness of the leadership itself which will ultimately increase the effectiveness of each phase. A shared leadership system is needed to be able to apply each type of leadership in each stage of disaster management. Systematic and continuous training is needed to develop the leadership skills of actors directly involved in disaster management. The training program is packaged to develop leadership skills from basic to advanced levels to master various leadership styles as preparation for applying contextual leadership concepts in the field. Apart from that, it also prepares disaster-prone maps, an Early Warning System, disaster management training, Disaster Education, and Forming Cross-Sector Networks in Disaster Risk Reduction, as well as of course the commitment of regional heads in implementing this model. It is hoped that by implementing this model, climate change disaster mitigation can run effectively. Climate Change Mitigation Area in Papua.

Author contributions: Conceptualization, APT and MB; methodology, F; validation, F, APT and MB; formal analysis, FAS; investigation, APT; resources, FAS; data curation, F; writing—original draft preparation, F; writing—review and editing, MB; visualization, F; supervision, FAS; project administration, F; funding acquisition, APT. All authors have read and agreed to the published version of the manuscript.

Conflict of interest: The authors declare no conflict of interest.

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