

# **ANALYSIS OF THE USE OF AIR DEFENCE SYSTEM SIMULATOR IN SUPPORTING TASKS IN WINGDIK 700/HANUD**

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**Abstract:** Universal war is a conflict that involves many components of the state in defending the territory of the state. In order to face universal war, good preparation and training for soldiers is very important. Therefore, this study aims to evaluate the role of drills and simulations in preparing soldiers for universal warfare. This research uses a qualitative approach with a case study method in the Indonesian Air Force. The results showed that drills and simulations have an important role in preparing soldiers for universal warfare. Drills and simulations help improve soldiers' technical and tactical skills, improve situational awareness, and improve soldiers' ability to work in difficult and complex conditions. In addition, exercises and simulations also help identify weaknesses and strengths in the operation plan, so that necessary improvements can be made before the actual operation is carried out. However, the study also shows that exercises and simulations are not fully capable of mimicking the conditions of actual universal warfare. Therefore, exercises and simulations need to be made part of a broader training strategy, which includes training in more complex and realistic situations, as well as improvements in non-technical skills such as leadership, interpersonal skills, and ethics. The study concluded that training and simulation are one of the most important factors in preparing soldiers for universal warfare. Well-planned drills and simulations can help improve soldiers' ability to deal with difficult and complex situations in universal warfare, enabling them to act effectively in dangerous situations and defend national security.

**Keywords:** Universal Warfare, Exercises and simulations, Technical and Tactical skills, Air defense.

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## INTRODUCTION

A universal war is a global conflict involving many countries and territories. Universal wars are considered a serious national security threat to countries around the world (Arianto, 2018). To deal with the universal war, good preparation and training for soldiers is very important. Soldiers must have the skills, knowledge, and abilities to deal with complex and difficult situations in a universal war environment (Zuhra, 2019).

One important aspect of soldier preparation and training is training and simulation (Zuhra, 2019). Drills and simulations are effective ways to improve soldiers' technical and tactical skills, improve situational awareness, and improve soldiers' ability to work in difficult and complex conditions. In addition, exercises and simulations can also help identify weaknesses and strengths in the operation plan, so that necessary improvements can be made before the actual operation is carried out (Ahmad Syofyan, 2022).

However, to optimize the role of drills and simulations in preparing soldiers for universal warfare, there needs to be a deeper understanding of how drills and simulations can help improve soldier preparation and training. Therefore, this study aims to evaluate the role of drills and simulations in preparing soldiers for universal warfare (Pramono et al., 2019). This research uses a qualitative approach with a case study method in the Indonesian Air Force (Allim et al., 2020).

Thus, the research results of this study are expected to contribute to improving the preparation and training of

soldiers to face the universal war more effectively. In addition, this research is also expected to be a reference for relevant parties in developing better and well-planned training strategies for soldiers (Petrus et al., 2021).

## Theory Review

1. Learning Theory. This theory can be used to explain how drills and simulations can help improve soldiers' skills and knowledge. Learning theory includes various concepts such as repetition, feedback, and motivation that can affect the effectiveness of exercises and simulations.
2. Situational Awareness Theory. This theory can be used to explain how drills and simulations can help improve soldiers' situational awareness. Situational awareness theory includes the ability to understand and respond to changing environments and situations, which is an essential skill in a universe war environment.
3. Theory of Artificial Intelligence. This theory can be used to explain how simulation technologies and systems can be used to prepare soldiers for universal warfare. Artificial intelligence theory includes concepts such as expert systems, neural networks, and machine learning that can be used to develop more realistic and effective simulations and exercises.

Theory of Military Strategy. This theory can be used to explain how exercises and simulations can help identify weaknesses and strengths in an operations plan. Military strategy theory encompasses a wide range of concepts such as

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operations planning, situation analysis, and tactics that can help prepare soldiers for difficult and complex situations in a universal war environment (Putra & Pramono, 2017).

## **MATERIALS AND METHODS**

This research uses qualitative methods by combining document analysis and observation. Case Studies from Informants who have knowledge and information related to research are selected *purposively*. Data collection techniques include: Non-participatory observation; Semi-structured interviews; Documentation; and Triangulation. Researchers used Miles analysis techniques from Huberman (Sugiyono, 2013), namely: Data reduction; presentation of data; and draw conclusions.

## **RESULTS AND DISCUSSION**

In research on the role of training and simulation in preparing soldiers for this universal war, using data sources both data from the Air Force, interviews with soldiers and instructors, direct observation in exercises and simulations in the field as well as documentation of regulations and policies related to the implementation of programs and exercises (Sofyan et al., 2018).

Due to the closure of the Hanud cannon factory, spare parts support was difficult to obtain. In carrying out heavy maintenance (*overhaul*) spare parts needs are forced to carry out component cannibalization.

In 1999 the Hanud cannon was an accident again in Pacitan with the death of Korpaskhas personnel. After this incident

Korpaskhas never received Hanud's weapons education and training and had no inspector personnel.

In 2004 the Indonesian Air Force received an allocation of QW-3 missiles with a *date of expiration (DOE)* of 10 years since production. The QW-3 missile was not initially integrated with the Hanud Radar, as the informant explained:

"From the beginning, the QW-3 missile could not be integrated with the Air Force's Hanud Radar. Only limited to oral information from the Command Post via radio communication (HT) about the direction and distance of the target".

In the procurement of QW-3 missiles, the informant's explanation from Mabasau was as follows:

"Korpaskhas only accepted the results of the Top Command's policy and never proposed the need for the QW-3 missile. The QW-3 missile is juridically not yet standardized as a Tactical Missile."

In 2005 there was a procurement program for the Indonesian Air Force PSU to replace old weapons. The reference used is Kasau Regulation Number: Perkasau / 82 / VI / 2007 dated June 30, 2007 concerning Guidelines for the Implementation of the Indonesian Air Force concerning *Operational Requirements* of Air Force Rank Units. One of the Implementation Guidelines is to determine the parameters of Hanud (PSU) as an element of Sishanudnas.

However, until the time this research was carried out, the procurement of PSUs could not be realized because there was a perception bias between the TNI Headquarters and Mabasau on the technical aspects (*operational*

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*requirements* and technical specifications) of the PSU to be purchased. TNI Headquarters used operational requirements in 2004 while TNI AU used *operational requirements* in 2007.

Based on the research findings, it is known that the QW-3 missile cannot yet be integrated with the Hanud Radar in Sishanudnas. To bridge the QW-3 missile to be integrated with the Hanud Radar in Sishanudnas, in 2010 there was a policy of procurement and allocation of Smart Hunter Radar.

## DISCUSSION

The benchmarks as indicators of success used are: 1) Kasau Regulation number: Perkasau / 82 / VI / 2007 dated June 30, 2007 concerning *Operational Requirements* of Air Force Rank Units with the latest technological content; 2) Sishanudnas.

Hanud cannon (PSU) since it was used by the Indonesian Air Force in 1962 there is no manual and no certificate of airworthiness, even until 1990 (for 28 years) it is still in service and there is no modernization policy. In 1990 Korpaskhas proposed a replacement gun, the Skyguard type made by Oerlikon Switzerland. However, according to the policy of the Indonesian Air Force leadership at that time it was replaced by the procurement of QW-3 missiles.

This is due to limitations: knowledge, professional management practices, and technical aspects, as well as the influence of perceptual bias of leaders (rulers) in policy decision making.

This research analysis combines descriptive methods and action research,

with the following data findings:

First, the absence of a certificate of eligibility and manual since the beginning of operation, has violated the provisions of work feasibility and safety. Supposedly the policy personnel forbade the Hanud cannon to operate without a certificate of airworthiness and a manual, but in fact the Hanud gun (PSU) was still in operation.

In addition, since the beginning of the Hanud cannon often experienced congestion when operated, there were no inspectors, the personnel who manned the gun did not receive education and training, and throughout the world only Indonesia (TNI AU) operated. By 1995 the factory had closed, resulting in limited spare parts support.

This was empirical evidence that Hanud's cannons were unfit for operation. Policy decision-making personnel should implement a policy implementation to prohibit the operation of the Hanud gun and replace it with the procurement of a new Hanud gun. But in fact, the Hanud gun is still in service until 2013 (for 51 years) and there has been no replacement or procurement of new guns. So, the implementation of policy implementation by policy decision-making personnel in addition to having limited knowledge, professional management practices and technical matters, there is a perception bias and intervention from the leader (ruler) in policy decision making. This is in line with the opinion of Hill et al (in Nugroho, 2009: 480) that there is a tendency for rulers or leaders to use the *Government Politics Model* or *Dominant Leader Model*, namely decision making based on the taste of the ruler and power.

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Second, the Korpaskhas personnel who manned Hanud's cannon received no more education and training; does not have inspector personnel; Cannons often experience bottlenecks when operated, in 1995 the factory was closed / no longer in production, so spare parts were limited. With these data, policy decision-making personnel should immediately implement the implementation of the policy to prohibit the operation of the Hanud cannon. But in fact, until the end of 2013.

(for 51 years) the Hanud cannon was still in service. It should have been after the Hanud cannon was *accidentally killed* twice and there were personnel casualties taken action or 'action' that is, the cannon was prohibited from operating, but in fact there was no *action* at all.

From the discussion, it is concluded as follows:

First, there was no implementation of a policy to prohibit the operation of the gun after two *accidents*, Hanud's cannon often experienced congestion when operated, did not have a certificate of airworthiness and did not have a maintenance manual, did not have inspector personnel, personnel did not receive education and training, and the factory was closed.

Second, policy decision-making personnel have limited knowledge, professional management practices and technical matters, as well as the influence of intervention and perception bias from leaders (authorities) in policy decision making.

Policy decision-making personnel should immediately *take action* to implement the policy, namely: 1)

prohibiting Hanud cannons from being operated; and 2) Replacing the Hanud cannon with a new procurement. But in reality there is no *action* at all.

Thus it is known that on the construction of the Hanud cannon force there has been no implementation of superior policies. This reflects that policy decision-making personnel have limitations: knowledge, professional management practices and technical matters. This is in line with Nugroho (2009: 506-510) stating that every policy has limitations, which include limited time, human resource capabilities, institutions, budgets, and technical matters.

There is no superior policy implementation because policy decision-making personnel are not intelligent and unwise. Not intelligent, because solving problems is not at the heart of the problem, and unwise because it produces new problems that are bigger than the problems solved (Nugroho, 2009: 706).

Thus, it was concluded that "limited HR capabilities affect policy decision making".

As a result of the policy that was not superior, in the period 1962-2002 the Hanud cannon there was no policy process for the procurement of new weapons or modernization.

From the description of the analysis of Hanud's cannon weapons it is concluded that "a policy that is not superior has an effect on the modernization of armaments".

In 2002-2003 there was a policy of procuring a replacement for the Hanud cannon, but by the leadership of the Indonesian Air Force at that time the target

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was changed to the procurement of QW-3 missiles which were not in accordance with the proposal of the coaching institution, namely Korpaskhas (namely Skyguard made in Oerlikon, Switzerland. Korpaskhas as a coaching institution and which mans PSU armaments only received the results of the QW-3 missile procurement policy. After testing, it was found that the QW-3 missile could not integrate with the Hanud Radar in Sishanudnas. Even though the criteria for PSU weapons purchased require that they can be integrated with Hanud Radar in Sishanudnas. Thus, the procurement of QW-3 missiles is not in accordance with the organizational objectives or mission of the Indonesian Air Force, namely the modernization of the PSU into the TNI AU Hanud in Hanud operations.

There is no coordination and no information from other agencies on the implementation of the QW-3 missile procurement policy so that finally the QW-3 missile cannot be integrated with the Hanud Radar in Sishanudnas. This is in line with Subarsono's view (2010: 100) which states that the implementation of a program needs the support and coordination of other agencies.

There is no agreement (due to intervention from leaders or rulers) in the QW-3 missile procurement policy due to the absence of communication and coordination, so Korpaskhas as a coaching institution and operator only accepts the results of the QW-3 missile procurement policy that is not in accordance with the proposed proposal (there is no mutual agreement). This is in line with Wahab's opinion (2010: 77) which states that every policy is usually in the form of regulations

that have been determined as a source of law or standard reference that is mutually agreed. In fact, every policy must get the legitimacy of its legal justification or must be in accordance with the applicable rules / regulations.

In the case of QW-3 missile procurement, Nugroho (2009:505) stated that the fundamental mistake of policymakers is to rely only on all under ideal conditions. Such a policy as a good policy but not correct, meaning that the formulation is good, but the implementation is not correct because there is an intervention. Related to intervention, Hill et al. quoted Nugroho (2009: 480) that **there is** a tendency for rulers or leaders to use the *government political* model or *leader model*, namely decision making based on the taste of the ruler and power.

Based on the research findings, there had previously been a proposal from Korpaskhas about replacing the Hanud cannon with a Skyguard cannon made in Oerlikon, Switzerland. But by the leadership of the Indonesian Air Force at that time the target was shifted to the procurement of QW-3 missiles, because of *vested interest*. In addition, every procurement of defense equipment is required to meet the *operational requirements* and technical specifications of the defense equipment to be purchased. *Operational requirements* and technical specifications require the availability of the latest technology, and can be integrated with Hanud Radar in Sishanudnas, in order to realize the TNI AU Hanud to support Hanud operations. But in reality the QW-3 missile procurement results cannot be

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integrated with the Hanud Radar in Sishanudnas.

The results of the QW-3 missile procurement should have been in accordance with the proposal of Korpaskhas as a coaching institution as well as an *operator (bottom-up)*, but in fact it was not in accordance with the proposal, instead there was a *top-down* policy. The results of the QW-3 missile procurement should be in accordance with the operational requirements and technical specifications of the Indonesian Air Force PSU (Perkasau / 82 / VI / 2007 dated June 30, 2007 concerning *Operational Requirements* of the TNI AU Range Unit), but in fact it is not in accordance with the *operational requirements*, namely the QW-3 missile cannot be integrated with the Hanud Radar in Sishanudnas.

Thus, there has been a non-synchronization of the QW-3 missile procurement policy with the submission of Hanud cannon weapons by operational units under it (Korpaskhas), and not in sync with the criteria required for TNI AU Hanud weapons as one of the elements in Sishanudnas, because they cannot be integrated with Hanud Radar.

According to the findings, it is known that in the QW-3 missile procurement process there was no coordination and information from other institutions, because it was not in accordance with the needs proposed by Korpaskhas as a coaching institution as well as an operator. Based on the information of sources that the target of the Hanud cannon procurement had been diverted to the procurement of QW-3 missiles by the TNI AU leadership at that time. This

phenomenon has been influenced by perceptual bias in policy decision making by rulers or leaders. This is in line with the views of Hill et al quoted by Nugroho (2009: 480) which states that "there is a tendency for rulers or leaders to use the government leader model or dominant leader model, namely decision making based on the taste of the ruler and power". In addition, the policy of transferring the target of the Hanud cannon procurement to the QW-3 missile procurement is an indication of the influence of perception bias in policy decision making and intervention.

From the description of the analysis, it is concluded as follows:

First, that there is a gap in policy-making personnel in the QW-3 missile procurement policy.

Second, policy-making personnel have limited aspects of knowledge, professional management practices, and technical matters.

Third, the non-synchronization of the QW-3 missile procurement policy with the submission of Hanud cannon weapons by the operational units below (Korpaskhas) and the criteria required for TNI AU Hanud weapons as one of the elements in Sishanudnas. Such conditions do not yet describe the existence of a system that guarantees the support of Sishanudnas operations in the Hanud operation pattern (for example, the integration of QW-3 missiles with Hanud radar in Sishanudnas) From the description of the analysis above, it is concluded that 'perception in decision making affects policy'.

However, the implications for the development of the Air Force Hanud force

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turned out to be very significant. In fact, the QW-3 missile cannot be integrated with the Hanud Radar in Sishanudnas and does not qualify as a TNI AU Hanud weapon, so it cannot be used in Hanud operations, meaning that the QW-3 missile cannot support the main task as a TNI AU Hanud weapon in Hanud operations.

*Operational Requirements* and technical specifications require the availability of the latest technology which is a requirement for a new program, namely new defense equipment to be purchased. Meanwhile, as a new program, the new defense equipment to be purchased requires that it can guarantee the achievement of the organization's goal, which is to become an Air Force Hanud weapon in Hanud operations carried out by Kohanudnas.

Thus, it is concluded that 'the availability of technology is a condition for the implementation of a new program and guarantees the achievement of organizational goals'.

In 2005 there was a procurement policy for the Indonesian Air Force and established and approved budget support in FY 2005 and FY 2006. The procurement process of the Indonesian Air Force PSU in FY 2005-2006 was in accordance with applicable regulations. This is strengthened by the basis used in the procurement of the Indonesian Air Force PSU, namely: first is the Regulation of the Minister of Defense Number: Per/07/VII/2006 dated July 6, 2006 concerning Procedures for Procurement of Military Goods/Services using Export Credit Facilities within the Ministry of Defense and the Indonesian National

Army; The second is the Letter of the Coordinating Minister for Economic Affairs Number: SR- 206 / M.EKON / 09/2005 dated September 12, 2005 regarding the allocation of Export Credit TA. 2005 Ministry of Defense/TNI; the third is the Letter of the State Minister of National Development Planning / Head of Bappenas Number: 7610 / M.PPN / 12/2006 dated December 26, 2006 concerning the Allocation of Foreign Grant Loans (PHLN) or Export Credits (KE) FY. 2006 for the Ministry of Defense. However, in early 2007 it turned out that there was no budget support for the procurement of PSU TNI AU.

Since the beginning of the TNI AU PSU procurement process, there have been differences in the use of *operational requirements* and technical specifications used as basic criteria for measuring the quality of the Indonesian Air Force PSU to be purchased, especially the availability of technology. In this context, there are differences in views and considerations between TNI Headquarters and Mabesau. TNI Headquarters uses *operational requirements* and technical specifications in 2004, namely Kasau Decree Number: 84 / VI / 2004 dated June 16, 2004 concerning Base Defense Operation Manual. Meanwhile, Mabesau uses the Rafters Regulation Number: Perkasau / 82 / VI / 2007 dated June 30, 2007 concerning *Operational Requirements* of Air Force Rank Units. The essence of the difference between these two regulations is the deployment of PSU weapons in one Firing Unit (Satbak). TNI Headquarters stated in one Satbak were 3 shoots (Skep Kasau No.84 / VI / 2004 concerning TNI AU

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Persuasion on Base Defense Operations) and Mabasau stated in one Satbak was

2 shoots (Perkasau / 82 / VI / 2007 concerning *operational requirements* and Technical Specifications of the Indonesian Air Force Rank Unit). At first glance, it is simple, but because the weapons data in one Satbak will later be used in the basis of calculating the number of weapons to be purchased in large quantities, so the difference will be very significant. In addition, the title of the Hanud cannon armament in the field will be different, especially for deterrence strategies in dealing with threats. Thus, this difference in technical issues becomes very important in determining the number of cannons and missiles in one Satbak.

Furthermore, in determining *operational requirements* and technical specifications of the Indonesian Air Force PSU is closely related to the availability of weapons technology. Given the dynamics of the development and progress of weapons technology is very fast, the Indonesian Air Force PSU always adopts the latest technology. If not, then the technology will quickly fall behind (*obsolete*). The speed and dynamics of technological development have a major influence on armaments. While the content of weapons technology affects the quality of human resources that crew it and organizations that Weighted technology. The phenomenon of *obsolete* PSU technology is evidence of a debate about the availability of technology in replacement PSUs.

Thus, it is concluded that the availability of technology is a condition for the implementation of a new program for

the achievement of organizational goals.

The occurrence of perception bias (differences in views and considerations) between TNI Headquarters and Mabasau regarding *operational requirements* and technical specifications of the Indonesian Air Force PSU is analyzed using *analysis of policy*, namely analyzing the entire policy process and descriptive methods (describing past and current policies). From the two analysis methods, the following policy implementation was found:

First, there is a discrepancy in the implementation of actions taken by the TNI Headquarters in coordination with Mabasau on Perkasau/82/VI/2007 dated June 30, 2007 concerning *the Operational Requirements* of the Air Force Rank Unit.

Second, in the implementation of the TNI Headquarters policy, it still uses Skep Kasau Number 84 / VI / 2004 dated June 16, 2004 concerning Base Defense Operations.

This research combines descriptive methods and action research. Descriptive methods are used to describe past and current policies, such as differences in views and considerations on *operational requirements* and technical specifications of the Indonesian Air Force Headquarters between TNI Headquarters and Mabasau, while action research is the actions of policy decision-making personnel. Differences in the use of *operational requirements* and technical specifications of the Indonesian Air Force PSU are assessed based on the suitability between the implementation of the policy that should be compared to the actual implementation of the policy.

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In fact, Perkasau / 82 / VI / 2007 dated June 30, 2007 concerning *the Operational Requirements* of the Air Force Rank Unit is more *updated* than Skep Kasau Number: 84 / VI / 2004 dated June 16, 2004 concerning the Technical Manual for Base Prisoner Operations. The TNI Headquarters should have used operational *requirements* and technical specifications in 2007, but in fact this was not the case, so it was concluded that there had been a gap in policy decision-making personnel at the strategic and operational levels.

Based on the research findings, it is known that from the three potential winners of goods/services providers, a review has been carried out to the goods/services factory/facility and product demos in accordance with the provisions for the procurement of goods/services in the three goods/services facilities. This review is based on *operational requirements* and technical specifications that have been required. From the results of the review it was found that "Oerlikon Contraves-AG", Switzerland met the requirements, while "Defex", Spain and "Thales", the Netherlands did not meet some requirements.

Based on the provisions, Switzerland's "Oerlikon Contraves-AG" should be the winner and proceed with the next procurement process. In this context, the implementation of the review and the results should have met the required conditions, so that the result is that there is no intervention from any party, let alone the personnel are in an independent team or group. This is based on the provision, namely that the personnel in the Team sent to all facilities providing goods / services

are personnel who have competence and profession in their respective fields. That is, the personnel in the Team have met the criteria of *knowledge* and *skills* as well as individual qualities according to the branch/corps. The existence of personnel in the Team is supported by an official Order in the ranks of the Ministry of Defense / TNI in accordance with the procedure for procurement of military goods / services (Ministerial Regulation Number: PER / 07 / M / VII / 2006 dated July 16, 2006). But in fact the results reported by personnel in the review team to the facilities of the provider of goods / services did not get a positive response. The evidence is still being reviewed and re-demanded to the goods/services facility by two Ministry of Defense officials in order to clarify the results of the review to the goods/services facility that has been carried out previously. This shows that the implementation of policies has limitations on aspects of knowledge, professional management practices, and technical limitations as well as perceptions and interventions. Thus, the implementation of the policy implementation is not superior. Policy implementation is not superior, for several reasons, namely:

First, the PSU procurement process using the PHLN/KE budget has been in accordance with the provisions or procedures and through stages carried out by several related agencies, that is, carried out openly. In addition, the basis used is in accordance with applicable legal provisions and procedures. However, in reality, there is a gap in the PSU procurement process.

Second, there should be no need for a

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review of the goods/services facility by two Kemhan officials, because previously a review of the goods/services facility had been carried out by the expert team. The personnel in the Team already have the required criteria related to technical matters. If the review is carried out by officials who are not in proportion, it is not appropriate, because the purpose of the review requires the possession of *knowledge* and *skill* criteria in technical aspects.

Third, after the winner's decision by the competent authority, but not supported by the institution below, the request for approval *paraf* as a condition for determining the winner for the provider of goods/services is not implemented. This is reinforced by the statement that coordination meetings that have been held and attended by all relevant agencies are considered to have never existed. This is not appropriate because the coordination meeting forum has been attended by personnel from all relevant agencies. Judging from the aspect of individual behavior, policy-making personnel are influenced by biased perceptions.

The results of the previous review by the Team have been qualified and valid according to law. There should be no need to review the facilities providing goods/services, but in fact the review of facilities providing goods/services is still being carried out, so it is concluded that there has been a gap in the implementation of the Indonesian Air Force PSU procurement policy, especially in policy-making personnel at the

strategic level.

Furthermore, a meeting was still held to synchronize *operational requirements* and technical specifications of the PSU. This is evidence that the implementation of the PSU procurement process is inconsistent with the applicable military goods/services procurement provisions.

This research combines descriptive methods and action research. Descriptive methods are used to describe past and current policies, such as the case of operational *requirements* synchronization meetings and PSU technical specifications, while action research is the actions of policy-making personnel. So, the implementation of the operational requirements synchronization meeting and PSU technical specifications after a review of the factory facilities providing goods/services will be assessed for conformity between the implementation of the policy that should be compared to the actual implementation of the policy *Operational requirements* and the technical specifications issued by Mabesau are used as indicators of the success of the Indonesian Air Force PSU procurement. There should be no need for a meeting to synchronize *operational requirements* and technical specifications after a review of the goods/services provider factory. The operational requirements and technical specifications synchronization meeting should be held long before the review of the goods/services facility is carried out, because the *operational requirements* and technical specifications of the PSU are used as indicators of the success of PSU procurement. But in fact, the

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implementation of the operational requirements synchronization meeting and technical specifications is not in accordance with applicable regulations.

The occurrence of review of goods/services facilities because policy decision-making personnel at the strategic level do not have accurate outside information about the results of the review, so there is a bias between the facts of the objective situation and subjective individual reality. This is in line with the views of Rowe and Boulgarides (1992, in Sarwono and Meinarno, 2009: 208) who state:

"In reality, information obtained through perception of a situation or problem involves a bias between the facts of the objective situation and the subjective reality of the individual. The existence of this perceptual bias will influence the interpretation and reaction of individuals to situations which will ultimately distinguish between individual styles of decision making."

From the description of the analysis above, it is known that there has been a discrepancy in the implementation of actions by policy decision-making personnel at the strategic and operational levels, especially in the implementation of the review and the implementation of meetings synchronizing *operational requirements* and technical specifications after a review of the goods/services provider facilities.

Policy decision-making personnel at the strategic and operational levels have limited human resources (knowledge),

institutional limitations (professional management practices) and technical matters. In addition, the implementation of the policy has been influenced by perceptions in decision making.

Thus, it is concluded that 'perception in decision making affects policy'.

After the QW-3 Missile procurement policy has not been successfully integrated with the Hanud Radar, then there is the Smart Hunter Radar procurement policy which is expected to bridge the QW-3 Missile in order to integrate with the Hanud Radar in Sishanudnas. However, the Smart Hunter radar is only capable of aiming the QW-3 missile at the target, but the QW-3 missile cannot be integrated with the Hanud radar in Sishanudnas.

From the description of the discussion on the procurement policy of the Indonesian Air Force PSU since its operation in 1962 until the end of 2013, it is concluded as follows:

First, the implementation of the Indonesian Air Force PSU procurement policy has vested interest, so it is not intended for the interests of the TNI organization, namely the Hanud operational mission in order to support Kohanudnas operations.

Second, for 40 years (1962-2002) there was no implementation of the PSU modernization policy, even though there were indications of the decreasing quantity and quality of Hanud cannon weaponry. In addition, the Hanud cannon accident was the result of unfavorable policy implementation.

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Third, the QW-3 missile procurement policy without solid coordination with relevant agencies is a policy implementation that is influenced by perception and intervention.

Fourth, the PSU procurement policy since 2005 and delayed until 2013 and there are differences in views and considerations between the two TNI institutions. This is an indication of no policy synchronization.

It thus concludes that 'equipment modernization (PSU) requires synchronization of policies at the strategic and operational levels to support organizational objectives'.

Policy decision-making personnel do not have competence according to their profession and there is no good coordination and information. This is shown by the difference in the use of operational requirements and technical specifications in PSU procurement.

From all the policy problems above, individual policy decision-making personnel are influenced by several factors, especially perceptions in decision making.

The delay in PSU modernization is due to policies that are not superior, namely: first is to solve problems not at the core of the problem; the second is to produce new problems that are bigger than the problems solved, such as the QW-3 Missile procurement policy and Smart Hunter Radar that cannot be integrated with the Hanud Radar in Sishanudnas, so it cannot support the main tasks of Hanud operations. 2005 to FY. 2013 has not been realized, even until August 2013 it is still

'status quo' because there is no definite decision.

According to the research findings data that in TA. 2005-2009 PSU procurement program has been followed up with budget determination. After the procurement process ran for 2 years (2005-2006), it turned out that the budget had no realization, so the PSU procurement was carried out re-processed.

After the procurement process ran for 8 years and until 2013 there has been no realization. Even to determine the winner of the Goods/Services Provider, there are differences in views and considerations (perception bias) between TNI Headquarters and Mabesau regarding operational requirements and technical specifications of the PSU to be purchased.

Ministry of Defense officials conduct a review of the facilities/factories providing goods/services for physical confirmation. After being concluded and determined the winner by Kemhan, it turned out that the TNI Headquarters gave a different opinion. Previously, an independent team has been appointed according to its field of expertise to carry out reviews to factories / providers of goods / services. After the results of the review were reported, it turned out that a review was still being carried out by Kemhan officials.

The occurrence of problems in the procurement of PSUs so that it was delayed for more than 8 years due to limited human resources, namely lack of competence in implementing policy implementation. The PSU procurement case is in line with the view of Hill et al as quoted by Nugroho (2009: 480) that there is a tendency for rulers or leaders to use the Government

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Politics Model or Dominant Leader Model, namely decision making based on the taste of the ruler and power. This condition according to Nugroho (2009: 480) that staff personnel only act "polishing the boss" or justifying the wishes of the leader.

From the overall analysis of Hanud's power building policy for the period 1990-2013, it is known that the personnel of policy decision makers have limitations knowledge, professional management practices, and technical matters. Policy implementation is influenced by perception bias and intervention, so that policy implementation is not superior. The reasons are: first, policy decision-making personnel are not intelligent and not unwise. Not smart, because solving problems is not at the heart of the matter. Unwise, because the implementation of the implemented policy actually produces new problems that are greater than the problems solved.

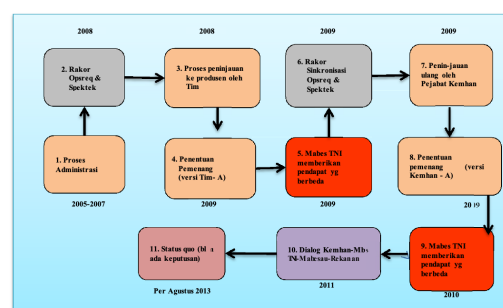
Thus, it is known that there has been a gap in the procurement process of the Indonesian Air Force PSU, in determining operational requirements and technical specifications. Overall, it is known that in the procurement process of the Indonesian Air Force PSU, there has been a gap in the implementation of policies implemented by human resources policy decision makers.

With this gap, the procurement process of the Indonesian Air Force PSU became longer (not ideal) because it was not in accordance with existing regulations and until August 2013 there was a "status quo". For more details, it is illustrated by comparing the flow of the Indonesian Air Force PSU procurement process at 'ideal

conditions' with the flow of the Indonesian Air Force PSU procurement process at 'gap conditions' as shown below:



**Figure 1. Alur Proses Pengadaan PSU TNI AU (Kondisi Ideal)**



**Figure 2. Alur Proses Pengadaan PSU TNI AU (Kondisi terjadi Kesenjangan)**

From the discussion of research findings data on the implementation of Hanud's power building policy, 4 propositions were obtained, namely: Proposition 1: "Perception in decision making affects policy".

Proposition 2: "The limitations of human capital capabilities affect policy outcomes" Proposition 3: "Equipment modernization requires the presence of synchronization of policies at the strategic and operational levels to support organizational objectives". Proposition 4: "The availability of technology is a condition for the implementation of a new program for the achievement of organizational objectives".

## CONCLUSION

There was a gap in the personnel of the decision making of the Air Force Hanud force building policy in the period 1990-2013. Gaps occur due to inconsistencies between policy formulation and policy implementation so that they are not superior. Policy implementation is not superior because policy decision-making personnel are not intelligent and unwise.

Not intelligent, because solving a problem is not at the heart of the problem, and it is unwise because it produces a new problem that is bigger than the problem being solved. This happens because there is a tendency for rulers or leaders to use the Government Politics Model or Dominant Leader Model, namely decision making based on the taste of the ruler and power. The implication is that the procurement process of the Indonesian Air Force PSU from 2005 to August 2013 was "status quo" (there has been no realization).

Out of sync of PSU procurement policy with operating needs. This is indicated by several phenomena as follows: a. There is no implementation of policy implementation by policy decision-making personnel on the modernization of the Hanud gun, so that after more than 40 years of operation of obsolete technology, it cannot meet the criteria required in operational requirements and technical specifications as a TNI AU Hanud weapon. b. The non-synchronization of the QW-3 missile procurement policy with the submission of Hanud cannon weapons by operational units

(Korpaskhas) and the required criteria for TNI AU Hanud weapons as one of the elements in Sishanudnas, so that QW-3 missiles are not integrated with Hanud Radar in Sishanudnas. c. Dissynchronization of the Air Force PSU procurement policy due to a perception bias between the TNI Headquarters and Mabesau in determining operational requirements and technical specifications used as a basis for reference. d. Dissynchronization of the Smart Hunter Radar procurement policy with the aim of integrating the TNI AU Hanud weapons with the Hanud Radar in Sishanudnas. The Smart Hunter radar cannot bridge the QW-3 missile to be integrated with the Hanud radar in Sishanudnas. e. Inconsistent in applying policies that have been made about defense equipment operations due to the influence of internal factors, namely knowledge, professional management practices, and technical factors.

Out of sync of arms power with personnel and organizational strength, resulting in a gap between the quantity and quality of the organization, weapons and the quantity and quality of human resources.

This is due to the tendency of rulers / leaders to use the Governant Politics Model or Dominant Leader Model, namely decision making based on the taste of the ruler and power.

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