

# The public safety and security policy model in African countries

## Abstract

Most African countries lack comprehensive formal public safety and security policies that articulate a national understanding of guiding principles, values, goals, strategic environment, threats, risks, and challenges. **This paper proposes a Public Safety and Security Policy (PSSP) model aimed at assisting African nations in developing robust national policies and implementation plans.** The model draws upon a conceptual framework informed by definitions, assumptions, conditions, and relationships among key concepts, addressing critical areas of PSSP development. **Informed by extensive literature review and expert consultations,** the model incorporates four foundational bases: **(1) theoretical underpinnings of public safety and security (PSS) science, (2) regional and global best practices, (3) constitutional and legal frameworks, and (4) existing domestic safety and security systems and practices.** This integrated approach offers actionable policy recommendations. The proposed PSSP model facilitates the identification and articulation of clear visions and missions for public safety and security. **It also establishes a two-stage institutional reform process, delineating political responsibilities for policy formulation from managerial and operational duties for implementation, thereby enhancing governance and accountability.** By addressing real-world challenges faced by African nations, the PSSP model has the potential to contribute significantly to socio-economic development, governance improvement, and the promotion of peace and stability. **Its practical impact is evident in how it can help nations navigate complex safety and security landscapes, ensuring alignment with good governance principles such as the rule of law and sustainable development goals.**

**Key Words:** Public Safety, Security Policy, Governance, Institutional Reform

## 1.0. Introduction

The Constitution of the United Republic of Tanzania recognizes public safety and security systems and efforts as pre-requisites for the success of the sustainable national social, economic development and integration processes. Since independence bold steps have been taken to create management, operational framework and structures to address public safety and security issues. The public safety and security system has been a condition where individual rights are protected from criminal, natural, social, environment and other disasters interferences. They signify peace and the absence of danger, alongside defense against bodily assaults and interference with property. Safety and security is a condition where all the people live in a peace, and their lives and properties secured. It is a condition that signifies absence of danger, fear as well as availability of defence against bodily assaults and interference with property.

## **1.1. The National Public Safety and Security Policy in Africa**

Most African countries do not have an overarching formal national public safety and security policies, (Africa Center for Strategic Studies, 2021). National public safety and security policy (NPSSP), also known as national safety and security doctrine, is a framework describing how a country provides safety and security for the state and its citizens. The NPSSP is a formal description of a country's understanding of its guiding principles, values, interests, goals, strategic environment, threats, risks, and challenges in view of protecting and promoting national security. Typically, NPSSP is based on a country's constitution, founding best practices, sciences and legislation. The policy clarifies behaviors and responsibilities of state institutions in providing security and upholding the rule of law, (Sicherheit und Frieden, 2012).

The lack of a grand public safety and security strategy inhibits prioritization of safety and security issues, threats, effective coordination, and alignment of resources, (African Union, 2013). Without a national safety and security strategy, there is no shared understanding and responsibilities of national safety and security vision, mission and objectives, and no national basis for leveraging partnership assistance, and international collaborations. As a result, in too many African countries, public safety and security provisions do not serve the public global good.

## **1.2. The National Public Safety and Security Policy in Tanzania**

The Government of the United Republic of Tanzania does not have an explicit/formal National Public Safety and Security Policy. This should not necessarily be seen as a weakness but rather a challenge to establish a system that will guide public safety and security systems, procedures and interventions. The implicit current public security and safety policies are found in broad, cross-cutting and sector specific national policies, programmes, budgets and government statements

The Tanzanian implicit public safety and security policy geared to achieve many good governance facets in a different modules across the various areas that are targeted by it and in that regard the policy is by default enabled the establishment of a system of enabling the participation of communities and other stakeholders in public safety and security initiatives, ranging from providing information and reassurance, to empowering stakeholders to identify and implement solutions to public safety and security challenges or problems and influence strategic priorities and decisions in public safety and security matters.

Operationally, the implicit national PSS policy has been a national policy– not a ministerial or institutional policy – and articulated the country's approach to make people and their property and assets safe and secure over the next several years. It reflected the increased understanding of the threats confronting the country, incorporated lessons learned from within and other countries on public safety and security, and articulates how we as a country should ensure our long-term success by strengthening the public safety and security foundation we have built through the institutions currently in place and the community. In that regard, these policies have been anchored in the basic principles which are shared also by many other nations. These basic principles included [1] prevent and disrupt threats, [2] protect people, property, critical

infrastructure and key resources [3], respond to and recover from incidents that do occur, [4] continue to strengthen the foundation to ensure our long-term success.

### **1.3. Objectives**

The objective of this paper is to attempt and develop a special PSSP model to assist in preparation of the national public safety and security policies and their relevant implementation plans in developing countries. The PSSP model integrates social, economic, political, engineering and other security sciences, (Ludek *et al*, 2015 and Ludek, 2016). A model is a framework of thinking constituting of variable definitions, simplifying assumptions; relationships, identified boundary conditions or initial conditions, and solutions. The model describes a system by a set of variables and a set of equations that establish relationships between the variables and relations. In this paper, a model is the collection of one or more independent variable and their predicted interactions that policy researchers use to try to explain variation in their dependent variable, (Ludek, 2016).

### **1.4. Methodology**

The paper is based on extensive literature reviews and expert consultations. Empirical evidence from recent national and regional initiatives, such as Tanzania's Baseline Evaluation Report on Public Safety and Security (2024), has been incorporated to strengthen the validity of the conceptual framework. The theoretical literature review helps to establish what public safety and security issues, theories already exist, the relationships between them, to what degree the existing theories have been investigated, accepted and to develop our conceptual framework. The conceptual framework includes the presumed definitions, assumptions, relationships among concepts, and addresses needed areas of PSSP model.

### **1.5. Coverage and Limitations**

The PSSP Model paper has four main sections. Section 1.0 is the introduction. Section 2.0 briefly examines the foundation for the PSSP model. Section 3.0 presents and discusses public safety and security policy model. Section 4.0 proposes the public safety and security sector reform program for the public safety and security organizations in Tanzania. This paper will not cover issues related

## **2.0. Foundation for the Public Safety and Security Policy Model**

There are four important foundations or bases for providing policy recommendations on the national public safety and security policy in Tanzania. These include [1] PSS security science (*theoretical foundation*), [2] regional and global best practice public safety and security systems, [3] constitutional legal bases for public safety and security in the country and [4] current existing public safety and security systems, services and practices.

### **3.0. Public Safety and Security Policy Model**

Section 3.0 develops the PSSP Model that integrates above summarized bases, namely, [1] public safety and security science (*theoretical foundation*), [2] regional and global best practice public safety and security systems, and [3] constitutional legal bases for public safety and security in the country, (Ludek *et al.*, 2015).

Sections 3.1, 3.2 and 3.3 present and define assumptions, conditions, endogenous variables / or policy target variables, exogenous or policy instrument variables, and economic, social and political welfare systems and structures. Section 3.4 examines generic or and specific forms, levels, stages, processes, activities. These are generic forms, levels and stages and specific modes and or system components. Section 3.5 presents the structural public safety and security policy model Section 3.6 presents the Reduced PSSP Model. Subsections 3.6.1 determine public safety and security model solution, and section 3.6.2 articulated vision and mission of public safety and security policy.

#### **3.1. Assumptions and Conditions**

Because of the complexity of public safety and security issues, it necessary for us, when designing and formulating policy models, to reduce the complexity of the problem by either simplifying the problem or constraining it by making restrictive assumptions and conditions. *The following are main policy model assumptions and conditions;*

- A. It is a democratic nation with valid constitution, national development vision, mission and policies, plans, programs and projects as some vital methods of providing, controlling, effecting and executing public safety and security policies, plans, programs and activities.
- B. There are existences of effective laws, regulations, institutional frameworks and management systems with the sole responsibility of coordinating effective public safety and security policy objectives, strategies and line of activities.
- C. National governments, regional, global development partners and all stakeholders have same and consistent national social economic development policies, opinions, or at least not conflicting interests concerning public safety and security systems.
- D. These are many, open and small economies. Public safety and security services, problems, an all form crises are global and easy to move, enter and exit.

These assumptions and conditions guarantee existence of solid national public safety and security systems aiming self-sufficiency in the basic requirements; ownership, management and operation of desired public safety and security systems for the benefit of current and the future generations, national, regional and global societies.

#### **3.2. Endogenous Variables / or Policy Target Variables**

Currently, public safety and security policy issues are realized independently (*in silos*), with each institution, agency, ministry and sector addressing its own kind of safety or security area.

Unfortunately, each kind of public safety or security mostly creates its own professional systems, conceptual systems, apparatus, capacities and competences, (Ludek Lukas, 2016). Many PSS specialists are aware of possibilities of connecting and integrating systems of national, regional of international security, fire safety, rescue, information security or work health safety in one comprehensive model.

This model attempts to identify, define and formalize these public safety or security areas and issues are follows. We define public safety and security, seen as a system, as composed of a set of parts or subsystems that interact to achieve a common goal, ( $Y$ ), (Ludek Lukas, 2016 and Lohmann and Panosso, 2017). The parts or subsystems, ( $Y_i$ ), comprise the public safety and security systems. We consider the following national public safety and security development policy and evaluation model, whereby we define our main target/ policy objectives as endogenous variable, (URT, 2024 and RGoZ, 2024),  $Y$  as;

$$1 \quad Y = Y_1 + Y_2 + \dots + Y_n$$

Where  $Y$  is the desired overall national public safety and security development levels and the following endogenous variables are considered as the specific target/ policy objectives, (URT, 2024):

$Y_1$ , is the preservation of the peace, justice, and the maintenance of law and order

$Y_2$  is, the prevention and detection of crime,

$Y_3$ , is the apprehension and guarding of offender

$Y_4$  is the protection of property, critical infrastructure and other key resources,

$Y_5$ , is the effective management, operation and monitoring of entry, movements, existence and exit of migrants in Tanzania and elsewhere,

$Y_6$  is the effective and efficient national border management systems

$Y_7$  is the efficient registration of persons in the URT and issues to them national identity cards,

$Y_8$  is the effective identification and provision of identification documents (ID) of all persons residing in the country,

$Y_9$  is the effective maintenance of a just and peaceful society through the safe, secure and humane custody of prisoners

$Y_{10}$  is the ensured universally accepted standards for the treatment of prisoners and successful correctional services, in particular rehabilitation and reintegration of prisoners back to the community

$Y_{11}$  prevent and minimize death rates, injury to the people, and damage to properties arising from the Force fire, floods, earthquakes, road traffic accidents and other disasters

$Y_{12}$  the effective participation in the national defence, intelligence and security operation systems <national health, food, communication, transportation, natural resources, social and other strategic security fields);

$Y_{13}$  is the Good Governance,

$Y_{14}$  is the Environment,

$Y_{15}$  is ICT and digital public safety and security systems and structures, *and*,

$Y_{16}$  is the gender

### 3.3. Exogenous or Policy Instrument Variables

In this policy model, an exogenous variable is one whose value is determined outside the public safety and security entity / subsystem and is imposed into the model, and a variable whose state is independent of the state of other variables in the social economic system. The exogenous factors are inputs into the system that are present and active in the public safety and security operations but that originated and controlled by other forces, institutions, and powers and thus can be considered as policy variable instruments. *The paper considers two types of exogenous variables.*

### **3.3.1. National or Internal Determined Efforts, Exogenous or Policy Instrument**

*The first categories* are exogenous policy variables ( $X$ ) which are outside the control of the sector firms or social economic entities but inside the control of the national social economic systems, (Ludek Lukas, 2016). Many policy models include systems (policies, laws, regulations and institutions, infrastructural and resources (human, capital equipment machineries, and technologies) as main or cored exogenous factors. Based on the public safety and security sciences and best practice we define national or internal determined efforts, exogenous or policy instrument variables, (URT, 2024 and RGoZ, 2024), as  $X_i$  ;

$X_1$  are other national sectorial, cross-sectorial and cross cutting policies

$X_2$  as relevant basic and subsidiary public safety and security laws and regulations

$X_3$  as internal and external public safety and security institutional frameworks

$X_4$  as public safety and security human resource systems

$X_5$  as public safety and security infrastructural systems and facilities such as land, buildings, airports, roads, water supply networks, sewage, telephones, etc.

$X_6$  as capital equipment, machineries and technologies such as transport, and ICT

$X_7$  as financial resources and systems for public safety and security sector development

$X_8$  as macroeconomic policies such as investments, monetary and fiscal policies

$X_9$  as social cultural systems

$X_{10}$  as other public safety and security sector specific factors

### **3.3.2. External Determined Exogenous Variables**

*The second categories* are external exogenous policy variables ( $Z$ ), which are outside the control of the country or nation or human beings. These include regional and global environment and climatic changes, politics, trade, technological changes and wars, (Ludek Lukas, 2016). These can be either positive (*opportunities*) or negative (*challenges*) effects on inputs and transformation processes, (Lohmann and Panosso, 2017). For example, the paper may define'

$Z_1$  as the weather as the state of the atmosphere, describing for example the degree to which it is hot or cold, wet or dry, calm or stormy, clear or cloudy. Weather is not limited to planetary bodies. Like all stars, the suns corona is constantly being lost to space, creating what is essentially a very thin atmosphere throughout the solar system

$Z_2$  as the war as an intense armed conflict between states, governments, societies, or paramilitary groups such as mercenaries, insurgents, and militias. It is generally characterized by extreme

violence, destruction, and mortality, using regular or irregular forces. These can include biological, nuclear and chemical warfare.

### **3.4. Economic, Social and Political Welfare Systems and Structures**

The model formulation considers that the overall and final objective of maximizing public safety and security welfare is to optimize current and future national ( $W$ ) social economic welfare development. We consider social economic welfare development to include social, economic and wealth aspects. The socioeconomic status is an economic and sociological combined total measure of a person's work experience and of an individual's or family's economic and social position in relation to others. When assessing national, family or individual social development categories, we can include income, wealth, education, health and occupation as key policy variable to be assessed, (Chao Wu and Bing Wang, 2023).

*Wealth*, a set of macroeconomic stocks, flows, reserves or assets, presents a source of security providing a measure of a household's ability to meet emergencies, absorb economic shocks, or provide the means to live comfortably. Wealth reflects intergenerational transitions as well as accumulation of income and savings. Income, age, marital status, family size, religion, occupation, and education are all predictors or factor variables for social economic wealth attainment.

### **3.5. Generic and Specific Status**

It is important to determine the exact generic position and specific status of forms, levels, stages, processes, and efforts of exogenous variables as implementing instruments. For example we may wish to know the generic forms, levels and stages of PSS policy, legal and regulatory and institutional systems in terms of its [1] existence, [2] functionality and operationability, [3], effectiveness, [4] efficiency and [5] consistencies.

### **3.6. Specific Modes and or System Components**

Mode is hereby defined as a type of public safety and security operational scale or pattern, coupled with a set of characteristic elements, constituents, building blocks steps, patterns and organic behaviors, (Chao Wu and Bing Wang, 2023). It is a part or element of a larger public safety and security whole, especially a part of a transformation system inputs, process and outputs. These are defined in the standard operating procedures, (SOPs), orders and instructions in all public safety and security organizations. The specific public safety and security modes or systems components may include [1] Base-case and Status Quo Regime [2] Proactive Mode, [3] Protective or Barrier Mode, [4] Preparedness Mode, [5] Participation, or Combating Mode and [6] Reactive Mode, (Ludek, *et al* 2015). These components are the critical building blocks of public safety and security system. Each public safety and security component meets a specific interaction, and has been specifically created to work together to create patterns and intuitive global, regional and national safety and security experiences, (David H. McElreath, *et al*, 2014).

### 3.7. The Structural Public Safety and Security Policy System

Let us be systematic and attempt to identify and define major elements in the public safety and security system (*PSSS*), which is important in the development of the sustainable public safety and security model. Figure 1 summarizes the *PSSS* model based on the *engineering system/model*.

#### 3.7.1. The System Model

Section 3.7.1 briefly examines the system model. A system is a group of interacting or interrelated elements or subsystems that act according to a set of rules to form a unified whole. A system, surrounded and influenced by its environment, is described by its boundaries, structure and purpose and is expressed in its functioning. Systems have several common properties and characteristics, including structure, function(s), behavior and interconnectivity. System theory views the world as a complex system of interconnected parts. We can make simplified representations (models) of the system in order to understand it and to predict or impact its future behavior. These models may define the structure and behavior of the systems.

*First of all*, the concept of public safety and security network has to be perceived from a holistic approach. It is composed of several subsystems. These are the inputs/resources-market ( $X_i$ ), production or transformation processes; ( $F(X_i)$ ) and output market subsystems, ( $Y_i$ ). The transformation process, ( $F(X_i)$ ) is any activity or group of activities that takes one or more inputs, transforms and adds value to them, and provides outputs for customers or client. It is all about transforming or and converting inputs/resources into outputs, ( $Y_i$ ). This can be done either through different technological service processes. The goal of the transformation process is to add value to the system so that it is worth more than the sum of its parts. To add value, the inputs ( $X_i$ ), must be transformed into something more beneficial to the customer.

A subsystem is a set of elements, which is a system itself, and a component of a larger system. The main *elements* they have in common are the components that handle input, scheduling, spooling and output; they also have the ability to interact with local and remote operators. A subsystem description is a system object that contains information defining the characteristics of an operating environment controlled by the system.

Figure 1 shows the system environment as primarily the set of variables that define or control certain aspects of process execution. They are set or reset each time a shell is started. From the system-management point of view, it is important to ensure the user is set up with the correct values at log in. Most of these variables are set during system initialization.

Figure 1 shows a system boundary as a rectangle that you can draw in a use-case diagram to separate the use cases that are internal to a system from the actors that are external to the system. A system boundary is an optional visual aid in the diagram; it does not add semantic value to the model. The boundary is the separation between the system and environment. The actual point at which the system meets its environment is called an 'interface'. It is often the case that the boundary is not sharply defined and that boundaries are conceptual rather than existing in nature.

**Figure 1: Public Safety and Security Systems**

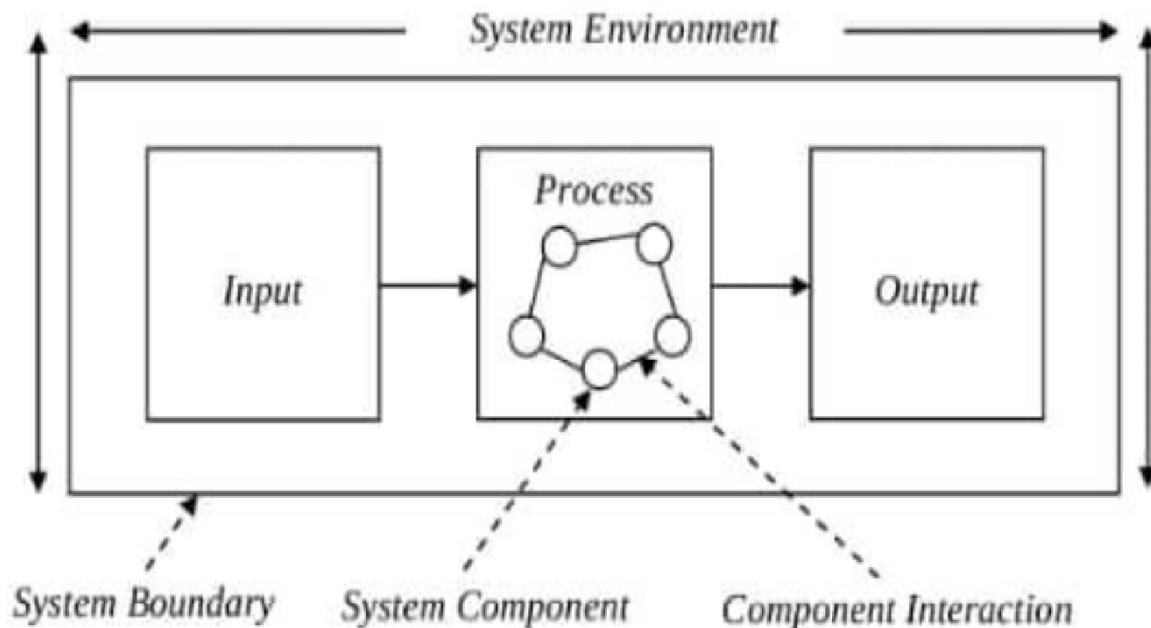


Figure 1 considers process as a series of actions or steps taken in order to achieve a particular end. Also, process is a series of progressive and interdependent steps by which an end is attained: a chemical process. Procedure usually implies a formal or set order of doing a thing, a method of conducting affairs: parliamentary procedure. A process may consist of system components and component interactions.

Figure 1 treats system components as the fundamental parts or elements that make up a larger system, such as a network and transformation processes. They are essential as they collectively contribute to the system's functionality, performance, and overall behavior. While similar to a computer program, an end-user does not directly interact with a system component when using a computer. Multiple system components are at work in a computer operating system, each serving a specific function. Together, they allow the operating system to function correctly and efficiently.

Component interaction refers to communication between two or more components created in any formal system. An interaction may arise when considering the relationship among three or more variables, components and describes a situation in which the effect of one causal variable on an outcome depends on the state of a second causal variable (that is, when effects of the two causes are not additive). Although commonly thought of in terms of causal relationships, the concept of an interaction can also describe non-causal associations (then also called moderation or effect modification).

The presence of interactions can have important implications for the interpretation of policy models. If two variables of interest interact, the relationship between each of the interacting variables and a third "dependent variable" depends on the value of the other interacting variable. In practice, this makes it more difficult to predict the consequences of changing the value of a variable, particularly if the variables it interacts with are hard to measure or difficult to control.

The notion of "interaction" is closely related to that of moderation that is common in social and health science research. It is the interaction between an explanatory variable and an environmental variable suggesting that the effect of the explanatory variable has been moderated or modified by the environmental variable. Also, shown in Figure 1 are the crucial linkages that exist between public safety and security systems, institutional systems and the *social milieu* and their dynamicity, (*see arrows*).

$$1 \quad PSSS_i = X_i^j + F(X_i^j) + Y_i$$

*Secondly*, first and foremost is to understand that all these public safety and security subsystems operate in a known, credible, stable and transparent environment or *Social Milieu (SM)*. This provides a basis for reciprocity and the development of trust among public safety and security units and their social economic and political functional mechanisms, (Lohmann and Panosso, 2017).

### 3.7.2. Social Milieu

The model assumes that the first system environment or *Social Milieu (SM1)* is largely, determined by a number of known factors (factors that are exogenous to all public safety and security units but which are endogenously determined in the whole-national/internal economic system). These determine public safety and security factors include the National Policies (*NP*), the Legal and Regulatory Framework (*LRF*), and Institutional Organizations and Arrangements, (*INST*). These are dynamic and change with *time*.<sup>1</sup>

$$2 \quad SM1 = NP \cup L \& R \cup INST$$

*Thirdly*, each one of them is labeled as networks of exchange relationships and systems. Two or more independent units or endpoints may be formally or informally interlinked. The overall public safety and security system is therefore viewed as sets of interrelated actors performing interconnected activities, by transforming and transacting heterogeneous and interdependent resources, (Lohmann and Panosso, 2017).<sup>2</sup>

*Fourthly*, is to acknowledge that public safety and security is a social economic activity operating in a *Social Milieu (SM2)* (Sutheeshnaet al, 2008). The social environment, social context, sociocultural context or milieu refers to the immediate natural, physical and social setting in which people live, interact or in this case which public safety and security develops. It includes the culture heritage that the workers and individual were educated, works or lives in, and the people and social economic institutions with which they interact. The interaction may be in person, (e.g., public safety and security and workers) or through communication media, businesses even anonymous or one-way, and may not imply equality of social status. This *Social*

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<sup>1</sup>. The time element is a crude approximation of technological change.

<sup>2</sup>. This use of industrial network is not different from the dominant use of the concept.

*Milieu (SM2)* is a multidimensional concept consisting of *Nature, Social, Culture, Heritage* and *Political* subsystems or elements.

$$3 \quad SM 2 = Nature + Social + Culture + Heritage + Political$$

*First* is to note that a milieu is a surrounding culture. Families, houses, neighborhoods, schools, and people interacting with make up the milieu. A milieu in this sense is both "surroundings" and everything that makes up the surroundings. All members of a social milieu (a religion, for example) do not necessarily create a social network, but members of an institution related to this group possibly do (e.g., a mosque, or a religious or spiritual community in a small town, whose members meet on a more or less regular basis). Milieu describes the surroundings of people, whereas environment describes the surroundings of anything, including people.

A well-designed *Social Milieu (SM2)* helps to foster positive peer relationships, creates positive interactions between public safety and security officers and workers, and provides opportunities for workers to support public safety and security to achieve their public safety and security system goals, (Lohmann and Panosso, 2017). The concept of milieu therapy developed from a desire to counteract the negative, regressive effects of institutionalization: reduced ability to think and act independently, an adoption of institutional values and attitudes, and loss of commitments in the outside world. The overall social milieu, (*SM*), is defined as follows;

$$4 \quad SM = SM1 + SM2$$

Actors, agents and people with the same social environment often develop a sense of social solidarity; these often tend to trust and help one another, and to congregate in social groups. They will often think in similar styles and patterns, even though the conclusions which they reach may differ. Solidarity or solidarism is an awareness of shared common interests, objectives, standards, and sympathies creating a psychological sense of unity of groups or classes. Unlike collectivism, solidarism does not reject individuals and sees individuals as the basis of society. It refers to the ties in a society that bind people together as one, (Norbert Vanhove, 2005).

### **3.7.3. Overall Public Safety and Security System**

The Overall Public Safety and Security System (*OPSSS*) is hence the union of networks of exchange relationships of all public safety and security subsystems i.e., the public safety and security system and the *Social Milieu* as shown in relation [4].

$$5 \quad OPSSS = PSSS \cup SM$$

All social economic entities or participants in the public safety and security sector, (e.g., individuals, firms, organizations) require accurate data, information and knowledge of the system, in particular of the relations between the public safety and security units, (Larson, 1991).

The above relations 1-5 constitute the PSSP Model. In globalised and democratic societies, public safety and security is a shared responsibility. Both the global public and private actors in the public safety and security enterprise are driven by the desire to ensure that everyone lives in a safe and secure environment. Thus all actors are expected to work towards preventing and reducing public safety and security threats.

In the above context, this PSSP Model regards the involvement of all actors namely law enforcement organs, intelligence community, and local communities in the process of delivering public safety and security as an essential element of a successful public safety and security approach. Public safety and security in this current approach revolve around the following facets that are considered applicable to a public safety and security framework that effectively engages all actors in a multifaceted way: have a detailed, multi-level understanding of the public safety and security issues. In this context, this policy is a national policy– not a ministerial or institutional policy – and articulates the country’s approach to make people and their property and assets safe and secure over the next several years. It reflects the increased understanding of the threats confronting the country, incorporates lessons learned from within and other countries on public safety and security, and articulates how we as a country should ensure our long-term success by strengthening the public safety and security foundation we have built through the institutions currently in place and the community.

### **3.8. The Reduced PSSP Model Determination**

The model solution is described and simultaneously attained by four interrelated functional forms and levels. These are [1] relationships between the policy targets and instrument variables, [2] relationships between the policy target variables and modes, [3] relationships between the modes and policy instrument variables, *and* [4] relationships between core endogenous variables and other endogenous variables.

This PSS Model has multi-dimensional and complex solutions, (Wu Chao, 2023). The baseline formulation policy research on the PSS complexity is not only the difficulty and focus of the development of SS science, but also the inevitable trend of the *new development of PSS science*. The establishment of PSS complexity science promotes the PSS science to enter a new stage, which is of great significance to enrich and develop the PSS science, (Wu Chao, 2023).

African Union Commission, (2013 and 2015), United Nations (2015), and Africa Center for Strategic Studies, (2021) advocate institutional reform which will create a clear separation between the political responsibilities for policy formulation on the one hand, and the managerial responsibility for the implementation of policy on the other. This implies that government will *first and foremost* take firm control of the policy environment within which the *public safety and security institutions* are required to operate and, at the same time, provide greater managerial autonomy for these PSS institutions to execute their operational mandate, (Republic of South Africa, 2016). This will, in effect, ensure greater accountability for improved public safety and security service deliveries.

#### **3.8.1. Public Safety and Security Policy Model Solution**

Like other many developing nations, the government of URT requires that the national policy to constitute two important documents. These are [1] the Main National Policy, and [2] its respective Implementation Plan documents, (URT, 2014). These documents are considered as national policy documents and must be read together and at the same time. *The first and foremost policy process is to formulate and draft these two important national policy documents based on the determined public safety and security policy model.*

In order to determine the public safety and security model solution and to provide policy options for enhancing the contribution of the organizational entities to sustainable public safety and security, it is important to identify and determine important variables and relationships determine public safety and security performances of all modes and operations at each particular stage and time. The performance of core public safety and security policy variables are complex functions of other interdependent endogenous (target variables,  $Y_j$ ); exogenous (policy instrument variables, ( $X$ , and  $Z$ )) and other external controlling variables.

Equation 1 has defined a simple public safety and security system. We will now determine sustainable public safety and security policy variable as a complex transformation function of exogenous (inputs  $X$  and  $Z$ ), other endogenous variables (other core-interdependent PSS operations) and other intermediating policy variables, ( $W$ );

$$7 \quad Y_i = f_i ( X, Z, Y_j, W ) \quad \text{where } i \text{ and } j = 1,2,\dots,7$$

We will focus and assess inputs ( $X$  &  $Z$ ) and output services ( $Y$ ) as measured in flow units, efforts: a certain amount of social, economic, political, systems and resources will produce a certain amount of desired public safety and security. Equation 7 considers that each public safety and security operations, activities, and institutional entities have stakes in the success of the others. Each search for ways in which inputs ( $X$  &  $Z$ ) can be utilized social cost-effectively, domestically and globally.

Above equations introduce elements of institutional linkages within the PSS networks. The institutional linkages are used here in a metamorphical sense and refer to the aggregated pattern of inter-unit relationships in the public safety and security systems. These linkages include: down-stream (or forward) linkages into public safety and security up-stream (or backward) linkages into all social economic services, spatial linkages into criminal justice systems and social economic development.

The assumption is that PSS links or bonds between various social economic actors in the social economic systems, such as suppliers of inputs, producers, customers and their supporting institutions may be viewed as a structure that can be perceived as a network, (Alain Martel and Walid Klibi, 2016). Most operating institutions are rooted in a socio-cultural, technical, and economic environment of more or less stable relationships to other actors, (Jose, 1994). Furthermore, it is assumed that the advancement of technological capability may be comprehended as interactive technical processes. Knowledge and skills are also created, adopted, modified and developed as an outcome of the linkages one firm develops and is able to develop with other firms.

### 3.8.2. Vision and Mission of Public Safety and Security Policy

The PSSS Policy Model may be used and assist in defining a clear vision ( $V$ ) and clear mission ( $M$ ) of the public safety and security in the country,

$$* \quad V = \sum_{i=1}^n Y_i \quad i = 1, 2, \dots, n$$

$$** \quad M = \sum_{j=1}^m X_j \quad j = 1, 2, \dots, m$$

Both  $V$  and  $M$  are projected on the long term perceptible ( $T$ ).

### 3.8.3. Relationship between the Policy Target and Instrument Variables

Let us first foremost consider a simple PSSP model function whereby the policy target variables ( $Y_i$ ) as function of only exogenous or instrument variables ( $X$  &  $Z$ ).  $X$  and  $Z$  are independent vectors. Other important variables included in relation 7 are held constant or as technical datum.

$$8 \quad Y_i = f_i ( X, Z^0, Y_j^0, W^0 ) \quad \text{where } i \text{ and } j = 1, 2, \dots, 7$$

Or

$$8^* \quad Y_i = f_i ( X ) \quad \text{where } i \text{ and } j = 1, 2, \dots, 7$$

### 3.8.4. The Policy Target Variables as Complex Function of Policy Modes

Let us now consider an operational PSSP model function whereby the policy target variables ( $Y_i$ ) is defined as simple function of only modes, ( $M$ ) at the institutional levels.  $M$  is a vector. All public safety and security organizations have own specific standard operating modes. These are based or founded on different modes such as 1] Base-case and Status Quo Regime [2] Proactive, [3] Protective or Barrier, [4] Preparedness [5] Participation, or Combating, and [6] Reactive Modes. These are dynamic, scientific and global. These vary with changes of time; resources, social welfare, economic developments and technologies.

$$9 \quad Y_i = f ( M ) \quad i = 1, 2, \dots, n$$

The commandants of public safety and security organizations (forces and departments) have the same national policy targets, ( $Y_i$ ). However, they consider modes ( $M$ ) as appropriate, relevant and direct ways, means, approach, technique, tactics and method of attaining the policy targets, ( $Y_i$ ).

### 3.8.5. The Modes as Complex Function of Policy Instrument Variables

Thirdly, we will consider a operational PSSP model function whereby the modes ( $M_i$ ) are defined as simple function of only exogenous or instrument variables ( $X$ ).  $X$  is a vector. All public safety and security organizations need to plan, arrange, manage and implement series of interrelated modes. These can operate as projects and programs. Programs are set of related modes, measures or activities with a particular long-term aims or policy targets ( $Y_i$ ).

### 3.8.6. The Core Endogenous Variables as Complex Function of Other Endogenous Variables

Like other countries, Tanzania has a number of organs that respond to the public safety and security needs of the country. Indeed, core organizations that are involved, whether consciously or unconsciously, in keeping Tanzania safe and secure are many. This is because public safety and security touch all aspects of our lives such as at home, at work, in our streets, outside and in our communities in general. In this regard many entities, together with the communities generally, have been singled out as involved in public safety and security issues. All of these institutions have mandates, whether by virtue of law or administrative arrangements. Yet, the discharge of the mandates by these institutions and their relationships to each other has not been all that clear and at times a source of problems in terms of service delivery. There has been always the need for improving communication, operation and collaboration among everyone involved in the delivery of public safety and security services; and increasing capacity to deal with public safety and security challenges and problems. Let us consider a special case where  $X$ ,  $Z$  and  $W$  are held constant and or as technical datum, therefore  $Y_i$  is defined as a simple function of  $Y_j$ , such that,

$$10 \quad Y_i = f_i ( X^0, Z^0, Y_j, W^0 ) \quad \text{where } i \neq j = 1, 2, \dots, 7$$

Equation 10 suggests a comprehensive public safety and security management system that incorporates all stakeholders. Equation 10 suggests the need to put in place a clear integrated and coordinated organizational system for public safety and security matters.

$$11 \quad Y_i Y_j \neq Y_j Y_i \quad \text{also} \quad Y_i Y_j > 0 \quad \text{and} \quad Y_j Y_i > 0$$

For example the current laws establish clear institutional relationships between the police force, defence, security and intelligence operations. For example, the current national defence legal framework consider that police force services are proactive inputs into national defence and security systems and operations, ( $Y_i Y_j$ ).

Above relations 8, 9, 10 and 11 suggest the need to identify the overall public safety and security policy objectives, strategies, modes and decisions required in the social economic and political processes that are necessary to make them effective and efficient PSS, in other words the strategic and operational features of the national public safety and security system.

The goals of the public safety and security system are to: [1] identify, plan and coordinate public safety and security efforts in the country at all levels; [2] set forth necessary plans and actions to

ensure quality public safety and security service delivery in the country in; [3] develop partnerships and communication with external stakeholders, organizations, and all levels of government as well as in the community; [4] reduce vulnerability to threats by identifying and applying effective counter measures to possible threats; [5] heighten nationalism, awareness, preparedness, and the need for planning at all levels of government, public and private sectors and citizenry through training, planning, exercises, and outreach; and [6] build upon the existing public safety and security infrastructure by unifying and maximizing utilization of assets and acquiring resources.

The section on variables (Yi, X, Z) has been expanded for clarity. Each variable is connected to specific challenges addressed by the policy:

- Yi variables, such as preservation of peace (Y1) and prevention of crime (Y2), address internal security issues.
- X variables, such as infrastructural systems (X5) and technological resources (X6), are tied to implementation efficiency.
- Z variables, including global climate changes (Z1) and geopolitical tensions (Z2), highlight external factors influencing policy success.

#### **4.0. Public Safety and Security Sector Reform**

The PSSP Model firmly advocates two-stages institutional reforms which will create a clear separation between the [1] political responsibilities for policy formulation on the one hand, and [2] the managerial and operation responsibilities for the implementation of national policy on the other, (African Union Commission, (2013 and 2015), United Nations (2015), and Africa Center for Strategic Studies, (2021)).

*This implies that at the first level/-stage, government will take firm control of the national public safety and security policy environment within which the public safety and security organs are required to operate and, at the same time, provide greater managerial and operational autonomies for these departments, and forces to execute their operational mandates. This will, in effect, ensure greater accountability for improved public safety and security service deliveries.*

*The second level/stage of policy processes and solution is the need for preparation, arrangement and implementation of the Public Safety and Security Institutional Reforms (PSS-IIR), (African Union Commission, 2013 and 2015 and United Nations, 2015). These institutional reforms must be founded, based and connected to the National Public Safety and Security Policy, (NPSS-Policy) and its corresponding Implementation Plan, (IP). The institutional reforms are internal and specific management and operational arrangements. Institutional reform refers to improving organizational management, operational and delivery efficiency and effectiveness in preventing, combating and repressing crime as well as to strengthening their democratic ethos and social economic and political accountability, (African Union, 2013)*

*The first and second level reforms must include amendment, or altering for the better, of some faulty state of things, esp. of an inefficient, corrupt or oppressive social, political and economic*

institution or practice; the removal of some abuse or wrong”. Reform consists of changes and improvements to a law, social system, or institution. A reform is an instance of such an effective change or improvement. Programs are set of related modes, components, measures or activities with a particular long-term sustainable public safety and security objectives.

The concepts of public safety and security reform (PSSR) generally refer to a process to amend, and direct the public safety and security sector towards good governance and its principles, such as the rule of law. The objective of public safety and security sector reform is to achieve good public safety and security sector governance —where safety and security actors are effective and accountable to their people. For example, this might guide policy decision-making on what form the oversight of public safety and security departments should, and forces take or how transparent will intelligence agencies be according to legislation. Different nomenclature of the same overall framework includes public safety and security system reform; sector reconstruction and criminal justice reform. This may entail establishment of effective governance, oversight and accountability in the security system; 2) improved delivery of security and justice services; 3) development of local leadership and ownership of the reform process; and 4) sustainability of justice and security service delivery, (African Union, 2013).

## **Conclusion**

The targets of public safety and security reform, (PSSR) are the components of the state that uphold national public safety, security and defense. Although the safety and security sector is therefore a wide term open to interpretations, we restrict to describe the structures, institutions and personnel responsible for the management, provision and oversight of security under the domain of the ministry responsible for home affairs in Tanzania. Therefore, the scope and target of PSSR has usually been defined comprising the [1] core public safety and security actors, [2] security management and oversight bodies, such as ministries of defence and home affairs, financial management bodies and public complaints commissions; [3] justice and law enforcement institutions, such as the judiciary, prisons, prosecution services, traditional justice systems; and [4] non-statutory security forces, such as private security companies.

## **Application Examples**

**Real-world applications of the model have been included. For example, the model’s implementation in hypothetical scenarios, such as combating border insecurity in East Africa or improving disaster response systems in Tanzania, illustrates its utility.**

Disclaimer (Artificial intelligence)

Option 1:

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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