

# RISK MANAGEMENT MODEL FOR THE STUNTING REDUCTION ACCELERATION PROGRAM

Nuzul Liliana<sup>1\*</sup>, Novita Tresiana<sup>2</sup>, Noverman Duadji<sup>3</sup>

<sup>1</sup>*Magister Students of Administration, Faculty of Social and Political Sciences, Universitas Lampung  
Bandar Lampung, Lampung, Indonesia*

<sup>2</sup>*Departement of Administration, Faculty of Social and Political Sciences, Universitas Lampung Bandar  
Lampung, Lampung, Indonesia*

<sup>3</sup>*Departement of Administration, Faculty of Social and Political Sciences, Universitas Lampung Bandar  
Lampung, Lampung, Indonesia*

[\\*nuzulrama22@gmail.com](mailto:*nuzulrama22@gmail.com)

## Abstract

The issue of stunting is one of the issues carried out in the national strategic goals in the 2020-2024 RPJMN. The Indonesian government is strongly committed to reducing stunting, this is reflected in the policy of Presidential Regulation Number 72 of 2021 concerning Acceleration of Stunting Reduction. At the implementation level, the issue of stunting reduction is intervened through the Stunting Reduction Acceleration Program (PPS) which has been implemented by involving 20 K / L and implemented gradually in districts / cities, starting with 100 districts / cities in 2022. In 2024, the Government targets the stunting prevalence rate to be 14%, with an accelerated reduction in stunting prevalence of 7.5% from 2023. This document describes the risk management that should be used as an instrument in the PPS Program to achieve the 2024 target. We integrate findings from various policy studies and best practices to guide efforts to implement effective risk management used in the PPS Program. This research uses the Systematic Literature Review (SLR) method. With the SLR method, researchers can determine the strategies used in overcoming the problems faced and identify different perspectives related to the Risk Management model in the PPS Program. The implementation of the PPS policy in various countries proves that the stunting management program does not escape the risks in the implementation process. This risk may become an obstacle in achieving the goal of reducing stunting. Therefore, several countries have implemented policies related to risk management. Risk management is integrative and specifically applied according to technical programs in stunting interventions. Best practices in several countries, both developed and developing countries, in dealing with the issue of stunting use two risk management approaches. This approach is divided into executive management and operational management approaches. Executive management uses formal risk management, namely ISO 3100, which has been proven effective, especially in the management of health programs such as stunting issues in both developing and developed countries. However, management does not limit operational management as a risk owner unit to perform risk identification tools uniformly but uses specific and different tools in each stunting handling program called vernacular risk management.

**Keywords:** Acceleration Program Stunting Reduction , Management Risk , Stunting Risk

## INTRODUCTION

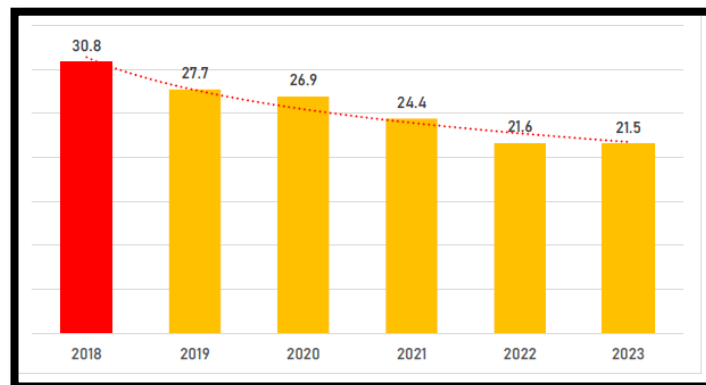
Stunting is a global problem that occurs in developing countries and is a problem highlighted by WHO. According to WHO, if the problem of stunting is not taken seriously, it is estimated that by 2025 there will be an additional 127 million stunted children in the world. In Indonesia, the problem of stunting is one of the strategic problems faced by the Government. This is evidenced by the determination of stunting issues as one of the national target priorities in the 2020-2024 RPJMN (Agustina & Hindun, 2023).

In determining the strategic issue regarding stunting, the Government has set a national target in 2024 of 14%. This government step has been stipulated in the policy of Presidential Regulation Number 72 of 2021 concerning the Acceleration of Stunting Reduction. This Presidential Regulation adopts the national strategic issue (*stranas*) of stunting by providing reinforcement for the implementation of programs in several aspects, especially in the institutional aspects, interventions, monitoring and evaluation, and funding. As a derivative of this regulation, the National Action Plan for the Acceleration of the Reduction of Indonesian Stunting Rates (RAN PASTI) was prepared which was coordinated by BKKBN as the Chairman of the Implementation of the Stunting Reduction Acceleration Team.

At the implementation level, the Stunting Reduction Acceleration Program (PPS) has been implemented involving 20 ministries and agencies and is implemented in stages in districts/cities, starting with 100 districts/cities in 2022. At the central level, after the stunting *stranas* was prepared in 2018, the government has strengthened both the planning and budgeting stages as well as the development of an integrated monitoring and evaluation system to be able to ensure that stunting treatment programs run well. The implementation of the PPS Program has received support from the World Bank since 2018. The World Bank's support is in the form of a grant of USD 24 million and a loan of USD 400 million through the program for result (PforR) mechanism through the Investing In Nutrition and Early Years (INEY) Program (Laporan Pelaksanaan Percepatan Penurunan Stunting, 2023).

The implementation of the acceleration of stunting reduction has begun to make progress, with a decrease in the prevalence of stunting in the 2018-2023 period. If in 2018 the stunting prevalence rate in Indonesia based on basic health research data (Riskesdas) reached 30.8%, then in 2023 based on data from the results of the Indonesian Health Survey

(SKI) the prevalence of stunting in children under five in Indonesia will be 21.5%. As seen in the following graph:



**Figure 1** Prevalence of Stunting in Toddlers in 2018-2023 (%)

Source: Riskesdas 2018, SSGBI 2019, Estimate 2020, SSGI 2021 and 2022 and SKI 2023, Ministry of Health

The amount of decline that occurred in the 2018-2023 period, when compared to the decline that occurred in the 2013-2018 period, is clearly seen that there is an acceleration. In the 2013-2018 period, the prevalence of stunting decreased by 6.4% points in 5 (five) years or an average per year of 1.28% points. Meanwhile, after acceleration efforts began in 2018, a decrease of 6.4% points can be achieved in 3 (three) years, namely from 2018-2021. This of course shows the success of the acceleration efforts that have been carried out in 2018–2023. The prevalence of stunting decreased 1.5 times faster compared to the 2013–2018 period. The decrease in prevalence by 9.3% in 5 (five) years is equivalent to 2.6 million children who can be saved from stunting. In 2018, the number of stunted children is estimated at 7.3 million and in 2022 the number of stunted children under five is estimated at 4.7 million.

However, if you look at the graph data, it can be seen that in 2023 the prevalence of stunting in Indonesia will only decrease by 0.1% from 2022 which was recorded at 21.6%. This means that this decrease is far from the target and average achievement of the previous year, which was at 1.86%. One of the causes of the low stunting reduction is that an effective implementation model for the program set in handling stunting in Indonesia has not been found (Ministry of Health, 2024).

This indicates that several policy implementations related to the PPS Program at both the Central and District levels in 2023 have proven to have experienced a decline in

performance. This decline in performance can be seen as the target of reducing the stunting prevalence rate has not been achieved and it is necessary to accelerate the reduction of stunting prevalence by 7.5% to reach the target of 14% by 2024. Therefore, an instrument is needed to protect targets, especially in the PPS Program, so that the Government of Indonesia can achieve the target of reducing the stunting prevalence rate of 14% by 2024.

The instrument used to protect the organization from the threat of failure to achieve goals is to carry out risk management. Uncertainty in implementing a goal, especially of the PPS Program, is due to rapid, dynamic, complex, unpredictable, and uncertain changes in the strategic environment in the era of VUCA (Volatility, Uncertainty, Complexity, and Ambiguity) and BANI (Brittleness, Anxiety, Non Linearity and Incomprehensibility) which is an accumulation of VUCA that causes changes in various joints of human life, especially government management (Sinha & Sinha, 2020).

A literature review in various countries across sectors concludes that risk management has been shown to make a significant positive contribution to organizational performance. These countries are not limited to developed economies but also in developing countries. A national survey involving 309 respondents of corporate leaders in Indonesia also provided similar conclusions. More specifically, there is a conclusion that MR has increased the economic competitiveness of corporate organizations (Priyarsono & Munawar, 2020). Based on the industrial sectors studied, historically the financial sector has been classified as the most intensive in implementing MR. However, recently, practically all sectors have implemented MR, including public institutions, non-profit organizations, and even higher education institutions to protect organizations in achieving their goals (Priyarsono et al., 2019).

In an effort to meet the achievement of performance targets in reducing the stunting prevalence rate, of course, we must pay attention to the principles of risk management in the implementation of PPS. The principles of risk management in the public sector can be the answer to solutions that will hinder implementation and become problems in achieving national strategic goals. Therefore, risk management is very closely related to the implementation of a national strategic program and goal to protect targets from pure risks that can have an impact on the achievement of a goal or goal of an organization, including the government.

Actually, the Government of Indonesia has carried out risk management in achieving the Government's strategic goals. This is evidenced by the existence of the National Development Risk Management (MRPN) policy in accordance with Presidential Regulation Number 39 of 2023 concerning National Development Risk Management. This MRPN policy has been adopted in the Grand Design of Bureaucratic Reform 2024-2045 and the Road Map of Bureaucratic Reform 2025-2029 which will be harmonized in accordance with the National Short-Term Development Plan (RPJPN) and the National Medium-Term Development Plan (RPJMN). The presence of the MRPN Policy is a tool in controlling the smooth implementation of thematic RB, especially handling stunting which aims to eliminate obstacles to governance problems.

However, technical instructions in the implementation of MRPN grand design in the implementation of the PPS program are not yet available. There has been no PPS risk management design either implemented across ministries and local governments. This is of course one of the threats to the failure to achieve the national target in 2024, especially in stunting reduction literature. In addition, stunting reduction literature is also included in the theme of the Bureaucratic Reform theme in accordance with the Regulation of the Minister of Bureaucratic Reform Apparatus Empowerment Number 3 of 2023 concerning Changes to the Bureaucratic Reform (RB) Road Map 2025-2029. In order to achieve stunting reduction strategies in accordance with the RB Road Map and achieve the national targets in the 2020-2024 RPJMN, risk management is a tool that must be formulated to protect literature from uncertainty and failure to achieve targets. In this study, the researcher examined the design of the risk management policy framework by analyzing the literature that supports the design of the MR framework of the PPS Program. The main focus of this literature review is to analyze and summarize research and articles related to risk management regarding stunting reduction strategies in various countries published between 2019 and 2024.

## **METHODOLOGY**

This study uses the Systematic Literature Review (SLR) type of research. The SLR method is a literature review method that identify, evaluates and interprets all the results of a research topic to answer a specific research question. This method is applied systematically

according to steps and protocols that help avoid subjective and biased understanding through the literature review process. Through the SLR method, researchers can obtain gap research and interesting new research areas to choose (Van Dinter et al., 2021).

The SLR method can obtain the results of previous research, then reviewed by the researcher, by systematically analyzing and identifying the selected research article. With the SLR method, researchers must identify and analyze several journals that are carried out systematically and using the steps in the SLR method (Rahmi et al., 2023).

The purpose of SLR is to determine the strategies to be used in addressing the problems faced as well as identify different perspectives related to the problem being researched. SLR also aims to reveal theories relevant to the case in the study.

The first step is to formulate the problem. The formulation of this problem is the process of identifying or finding the problem why the research is carried out. In this study, researchers investigated the problem through research journals on the results of previous research. The topic of the problem raised in this discussion is the Design of Risk Management Policy in the Stunting Handling Acceleration Program. The purpose of this literature review is to answer several research questions:

RQ1 : How is the design of the Risk Management policy framework in the Stunting Reduction Acceleration Program?

RQ2 : How is the strategic implementation of a dynamic Risk Management Policy in the Stunting Reduction Acceleration Program?

Then, the second step is to conduct a search and identify relevant journals and articles through academic databases sourced from science direct, mendeley and google scholar. The study design is used with data analysis and synthesis methods that focus on the research results, summarize the content and draw conclusions related to previous research studies that will be used in the research plan.

The third step of this researcher is to choose the latest journal in the period of 2019 to 2024 to be studied and used as a textbook reference. After getting the appropriate journal, the researcher analyzes and groups the selected journals into the form of a table containing the author's name, year of publication, journal title, research method and research results. The SLR method also uses the qualification requirement step, discussing related to the quality of the researcher's SLR method which refers to the evaluation of real data sources of journals

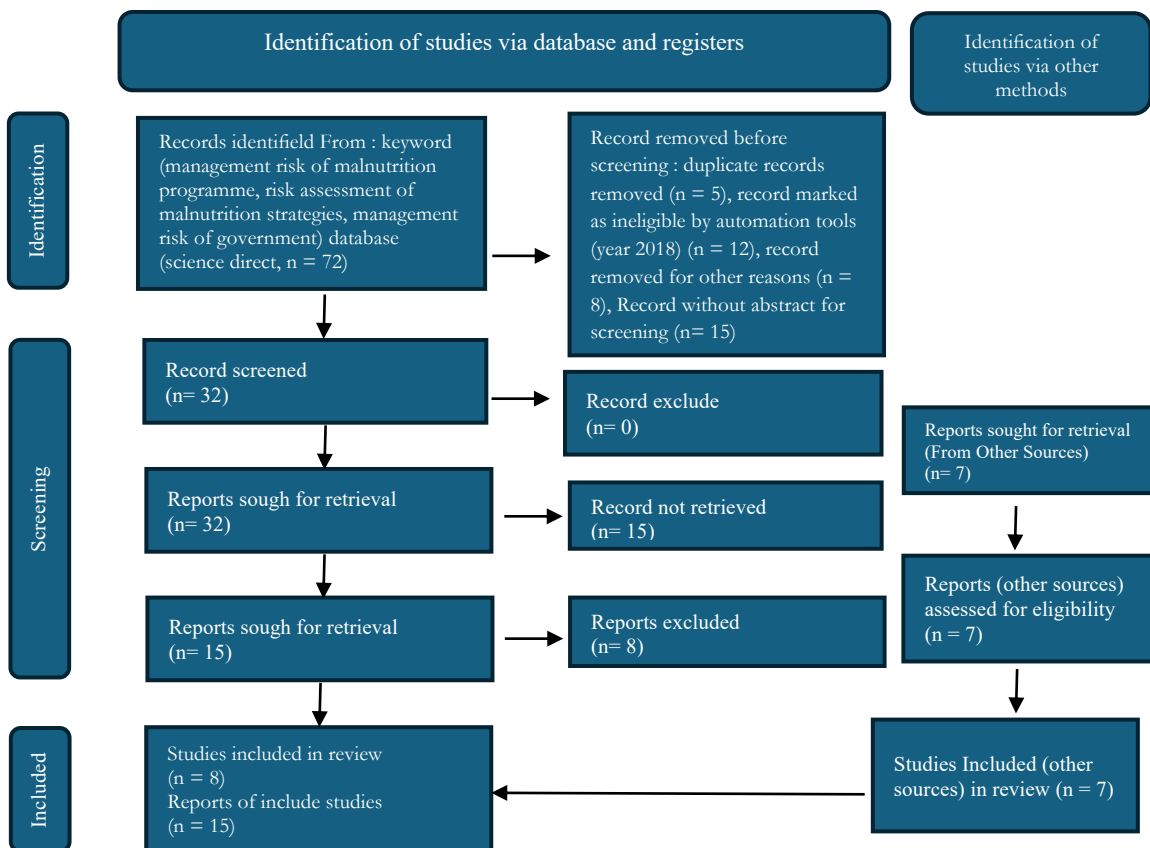
using peer-reviewed, CiteScore-indexed, Journal Impact Factor (JIF) Source Normalized Impact per Paper (SNIP) criteria for Science Direct and mendeley. This criterion can go beyond the data or articles selected for further analysis.

The last step is to make a conclusion of the research, discuss the results of the logical analysis, draw conclusions or brief explanations and include answers to the questions asked in the research and understand the summarized research results.

## RESULTS AND DISCUSSION

This research and discussion uses a systematic literature review using the prism method (preferred reporting items for systematic reviews and meta-analyses) which is divided into four steps, namely through identification, screening, feasibility requirements and results. At the search stage, the researcher used criteria to be included in the database, namely articles and journals related to risk management at local government in the Child Malnutrition Handling Program. Furthermore, the researcher applied inclusion and exclusion criteria looking at the publication period from 2018 to 2023.

**Table 2** SLR Research Prism



Determining the database, the data information used by the researcher is science direct and google scholar obtained from the electronic data business portal.

The determination of the database using keywords, from the results of the review search using the SLR method produced 72 journals and articles with the keyword risk management of malnutrition program obtained 34% of the research journals used, the keywords risk assessment of strategies malnutrition 44% and 22% of the keywords risk management of government. Then, the researcher conducted screening and eligibility requirements by applying exclusion criteria related to the year of publication of irrelevant research and unvalidated sources, 32 research journals were obtained.

Furthermore, evaluation is carried out in the last step by producing journals with the same research title and authors from several sources, journals with incomplete research data and lack of methodology and other research findings such as sufficiency of sampling, looking for biases in research using the help of applications that use the prism method.

Determination of inclusion and exclusion criteria, based on journals and risk management articles on malnutrition programs. In the SLR method, the inclusion criteria are characteristics that must be met by each member of the selected population as an example of inclusion criteria in the research and in this discussion, among others: international journals related to risk management in stunting management programs, as well as risk management applied in public or government organizations. Meanwhile, the exclusion criterion is a criterion that eliminates the subject process that has met the inclusion criteria from the discussion (nurhasana, 2020). The following are the results of research using the SLR method regarding relevant research journals:

**Table 1** The results of research using the SLR method

No	Author/Year	Country of Study	Title	Method	Result
1.	Masoud Ferdosi, Reza Rezayatmand & Yasamin Molavi Taleghani To/ 2020	Eropa	Risk Management in Executive Levels of Healthcare Organizations: Insights from a Scoping Review (2018)	Literature Study Review	The results of the study show that there are 37 health organizations, both Ministry of Health, health departments and hospitals, both

					private and government hospitals using risk management with the ISO31000 model as a comprehensive but simple risk management framework developed for the executive level of HCO. The framework includes five main phases: setting the context, risk assessment, risk handling, monitoring and review, and communication and consulting. This framework can be used as a training tool to guide effective risk assessment as well as a tool for assessing the non-clinical risk of healthcare organizations (Ferdosi et al., 2020).
2.	Martin Carlsson-Wall, Kalle Kraus, Anita Meidell, dan Patrik Tran/ 2018	Swedia	Managing risk in the public sector – The interaction between vernacular and formal risk management systems	Quantitative	Public sector management in the Swedish government combines formal risk management with a vernacular risk management system that brings the effectiveness of risk management in the public sector. Risk management

					in the public sector cannot only rely on formal risk management that has been established, but the public sector must adopt risk management from various disciplines such as crisis management, project management, health and safety management and social which emphasize local adoption and the need for organizations to know the details of local adaptation of each risk found by each risk owner, especially on street beuracy as the spearhead of public organizing.
3.	Adelheid W. Onyangoa Juddy Jean-Baptisteb Betty Samburuc Tshimi Lynn Moeng Mahlangud/ 2019	Afrika	Regional Overview on the Double Burden of Malnutrition and Examples of Program and Policy Responses: African Region	Literature Study Review	The trend of decreasing stunting prevalence is not in line with the increasing number of children experiencing chronic malnutrition in Sub-Saharan Africa. In addition, child malnutrition programs also have an impact on overweight/obesity which increases in all age groups, which is related to

					<p>diet, now one of the leading causes of premature death. The observation that obesity can negate the benefits that contribute to increased life expectancy also applies in the African region. Sessions in the symposium highlighted several elements that are important for the success of child malnutrition policies and programs. To address malnutrition, policies and interventions supported by strong leadership, funding, monitoring systems, standards and guidelines are needed to control the consumption of unhealthy foods. The policy should limit the marketing of unhealthy foods to children, while encouraging students to become agents of positive change.</p>
4.	<p>Emilie Reber , Filomena Gomes, Maria F. Vasiloglou, Philipp Schuetz and Zeno Stanga / 2019</p>	<p>Switzelan d</p>	<p>Nutritional Risk Screening and Assessment</p>	<p>Quantitative</p>	<p>Nutritional risk screening, a simple and quick first-line tool to detect patients at risk of malnutrition,</p>

					<p>must be carried out systematically in patients admitted to hospitals. Patients with nutritional risk should subsequently undergo a more detailed nutritional assessment to identify and measure specific nutritional problems. Nutritional treatment plans must be developed with a multidisciplinary approach, and implemented to maintain and improve the nutritional condition of patients in order to reduce stunting problems experienced by children early.</p>
5.	Viviane Dumle Chinwah/2020	Nigeria	PRISMA Model for Improving Maternal-Child Healthcare Outcomes in Rivers State, Nigeria	Quantitative	<p>Based on the findings of the study, the Prisma Model in risk management for maternal and child health services is quite effective in Nigeria, but the constraint to this MR Model lies in the lack of evidence-based practices in health care settings with limited resources. Second, the lack</p>

					of a unified approach to improving healthcare delivery in Nigeria. Third, intervention used in Nigeria to improve healthcare outcomes failed to develop into actions involving many stakeholders (Chinwah, 2020)
6.	I Gusti Lanang Sidiartha, I Gusti Ayu Putu Eka Pratiwi / 2018	Indonesia	Implementation of STRONGkids in identify risk of malnutrition in government hospital	Quantitative with observational methods of cross-sectional analysis	The results of the study can be concluded that STRONGkids can be recommended to identify the risk of malnutrition in hospitalized children (Sidiartha & IGAPE, 2018).
7.	Olivier Mukuku ,Augustin Mulangu Mutombo, Lewis Kipili Kamona, Toni Kasole Lubala, Paul Makan Mawaw,Michel Ntetani Aloni ,Stanislas Okitotsho Wembonyama,and Oscar Numbi Luboya/ 2019	Kongo	Predictive Model for the Risk of Severe Acute Malnutrition in Children	Metode Case-control study	The findings show that the Severe Acute Malnutrition (SAM) risk prediction model can be a simple and efficient tool to detect the risk of malnutrition in children under 5 years of age in developing countries. This SAM predictive model will be a useful and simple clinical tool for identifying people at risk, limiting high rates of malnutrition, and

					reducing child illness and mortality in developing countries (Mukuku et al., 2019a).
8.	Marianthi Sotiraki, Aggeliki Malliou, Ntaniela Tachirai, Nikoletta Kellari Maria G. Grammatikopoulou, Theodoros N. Sergentanis and Tonia Vassilakou/ 2020	Eropa	Burden of Childhood Malnutrition: A Roadmap of Global and European Policies Promoting Healthy Nutrition for Infants and Young Children	Literatur Review	The results of this study state that there are impacts and risks in malnutrition policies on children, namely overweight and obesity and psychosocial impacts, as well as the emergence of inconsistent policies between plans, interventions, and achievements. Few countries have developed proper monitoring systems for malnutrition policies. A more comprehensive approach to the burden of childhood obesity reveals a major impact on various daily lives of children who are treated with additional nutrition in stunted children (Sotiraki et al., 2022).
9.	Corinna Hawkes, Marie T Ruel, Leah Salm, Bryony	Eropa	Double-duty actions: seizing programme and policy	Study Literatur	The results of the study show that the program to reduce

	Sinclair, Francesco Branca/ 2020		opportunities to address malnutrition in all its forms		malnutrition in children has risks to children's health. This study provides the results of risk mapping and control in the form of policies that can be applied to mitigate risk events due to the impact of child malnutrition programs (Hawkes et al., 2020).
10.	Rafaella Oliveira Baracho, Nolan Ribeiro Bezerra and Paulo Sérgio Scalize / 2024	Brazil	Proposition and Application of a Conceptual Model for Risk Management in Rural Areas: Rural Basic Sanitation Safety Plan (RBSSP)	Qualitative Case Studies	The Risk Management Model on the basic sanitation access program for low-income residents is considered effective. The model has a framework that includes six basic principles, six steps, and twenty actions to take. In the case study, the application of the final conceptual model was simulated for rural settlements, which led to significant changes in actions, subdivisions, and phases. This Sanitation risk management model highlights that the factors of community

					participation, involvement, and empowerment are the successful implementation of the sanitation access program (Baracho et al., 2024) .
11.	Marc Schut, Julien Colomer, Emma Proud, Enrico Bonaiuti, Iddo Dror, Edwin Kang'ethe, Lorena Esquivias, Cees Leeuwis / 2024	Southern Africa	Innovation portfolio management for responsible food systems transformation in the public sector: Lessons, results and recommendations from CGIAR	Analysis with the CGIAR approach with a descriptive case study approach.	The results of the study show that one of the tools in innovation portfolio management for global food is human resource management, finance, local frameworks and risk management. Risk management is one of the tools to identify and mitigate the potential impact of the large-scale use of innovation and ensure responsible innovation (Baracho et al., 2024).
12.	Ling-Ying Wang, Lin Hu, Xiao-Ying Huang, Meng-Lin Tang/ 2021	China	Implementation of STRONGkids for identifying nutritional risk in pediatric intensive care unit: a survey of Chinese practice	Quantitative	Model manajemen risiko dengan tools atau alatskrining Strongkids sangat mudah digunakan dan dapat menentukan risiko malnutrisi di rumah sakit. Tools ini dapat memastikan intervensi cepat yang dapat berkontribusi perbaikan

					keseluruhan dalam perawatan pasien anak, serta pemendekan treatment dalam kasus malnutrisi.
13.	Valeria Trivellone, Eric P. Hoberg, Walter A. Boegerand Daniel R. Brooks / 2022	Amerika	Food security and emerging infectious disease: risk assessment and risk management	Qualitative case studies	The appropriate risk management models used in food security are the Stockholm paradigm model and dama (document-assess-monitor-act)s. This risk management is realized through targeted interventions focused on information exchanged among the scientific community, food safety and public health policy practitioners, and local populations (Trivellone et al., 2022a).
14.	Patrick Webb, Goodarz Danaei , William A. Masters, Katherine L. Rosettie, Ashley A. Leech, Joshua Cohen, Mia Blakstad, Sarah Kranz, Dariush Mozaffarian, the Global Nutrition and Policy Consortium/ 2021	India, Nigeria dan Ethiopia	Modelling the potential cost-effectiveness of food-based programs to reduce malnutrition	Qualitative	Cost-effectiveness models for addressing malnutrition are sufficiently sensitive to the cost-effectiveness of interventions that are sensitive to the study area can achieve a 20% reduction in child stunting and a 15% reduction in child mortality (Webb et al., 2021).

15.	Sheila Isanaka,1 Dale A Barnhart,2 Christine M McDonald,3 Robert S Ackatia- Armah,4 Roland Kupka,5 Seydou Doumbia,6 Kenneth H Brown,4 Nicolas A Menzies7	Mali	Cost- effectiveness of community- based screening and treatment of moderate acute malnutrition in Mali	Metode incremental cost- effectiveness analysis	Cost-effectiveness analysis can be used to inform national and international decision-making and direct resources to interventions with the greatest potential in improving child health. The MAM method is associated with most of the burden of child morbidity and mortality, but appropriate treatment can reduce the duration of MAM episodes and the risk of progression to the SAM method (Isanaka et al., 2019) .
16.	Alexander Cedergren, Henrik Hassel, Henrik Tehler/ 2022	Swedia	Tracking the implementation of a risk management process in a public sector organisation – A longitudinal study	methods for data collection to evaluate the development and implementatio n of the Risk and Vulnerability Assessment (RVA)	Public sector risk management is heavily influenced by the resources available, and the commitment by the people involved in the risk assessment process (Isanaka et al., 2019) .
17.	Tu Thanh Hoai, Bui Quang Hung, Nguyen Phong Nguyen/ 2022	Vietnam	The impact of internal control systems on the intensity of innovation and organizational performance of public sector	Quantitative	The results of the study show that transformational leadership can improve the internal control system in new public

			organizations in Vietnam: the moderating role of transformational leadership		management and can improve organizational performance. One of the control systems is to carry out risk management to improve the performance of the Public Sector Gandhi. (Hoai et al., 2022)
18.	Rachita Gupta1 · Ravi Shankar2 · Kee-Hung Lai3 · Ajay Kumar4 /2022	India	Risk profiling of food security impediments using decision maker's behavioural preference towards operational risk management	A hybrid methodology that integrates Fuzzy Set Theory (FST), to model ambiguous and incomplete information, with the Evidence Reasoning (ER) algorithm.	A risk profile approach can help decision-makers to adequately plan their actions to address operational risks related to food security (Gupta et al., 2023).
19.	MEHRETU BELAYNEH ESKINDIR LOHA BERNT LINDTJØRN/ 2021	Southern Ethiopia	Spatial Variation of Child Stunting and Maternal Malnutrition after Controlling for Known Risk Factors in a Drought- Prone Rural Community in Southern Ethiopia	Quantitative with the method of a community-based cohort study design	A rough analysis of SaTScan is a tool that can detect stunting risk in showing areas of high risk for stunting cases, such as in southern Ethiopia that children who are stunted in the identified spatial groups are more likely to come from poor households, have younger mothers and are illiterate, and often these mothers are farmers and

					housewives (Belayneh et al., 2021a)
--	--	--	--	--	-------------------------------------------

In order to gain a deeper understanding of the journal being studied, the author explains the research findings in the table above and then describes them to make it easier for researchers to answer research questions. Based on research conducted in Europe in the table above, it is stated that there are impacts and risks in malnutrition policies in children, namely the presence of overweight and obesity as well as negative psychosocial impacts due to the handling of stunting on children's nutrition. Then there is the risk of the emergence of policies that are inconsistent between plans, interventions, and achievements. Few countries have developed proper monitoring systems for malnutrition policies. A more comprehensive approach to the burden of childhood obesity reveals a major impact on various sectors of daily life (Sotiraki et al., 2022). This is also reinforced by other research conducted in the UK that child malnutrition reduction programs have risks to children's health. This study provides the results of risk mapping and control in the form of policies that can be applied to mitigate risk events due to the impact of child malnutrition programs (Hawkes et al., 2020). Therefore, instruments and tools are needed to manage the risks that occur in stunting control programs in children.

In the first journal, it was found that the risk management methods used by health departments, ministries of health, health organizations both Private Hospitals and Government Hospitals in Europe at the executive level use the ISO 31000 framework. ISO 31000 is used as a reference in risk management at the executive management level. This study found that risk management has effectively assisted health management both in nonclinical risks in healthcare organizations, as well as operational risks related to the implementation of management in healthcare organizations. Managers of healthcare organizations that seek to ensure high quality must use a variety of risk management methods and tools within their organizations, based on their needs, and assume that each tool is comprehensive in order to avoid failure to achieve executive management goals in healthcare organizations (Ferdosi et al., 2020).

This research is also strengthened by the findings of a study on risk management best practices in the Swedish Government, that risk management in the public sector can not only

rely on formal risk management that has been established but the public sector must adopt risk management from various disciplines such as crisis management, project management, health and safety management and social which emphasizes local adoption and the need for organizational Knowing the details of the local adaptation of each risk found by each risk owner, especially on Street Beuracry as the spearhead of public organization. This risk management is called a vernacular management system. The vernacular risk management system effectively assists formal risk management in improving the control system within public organizations (Martin, 2023).

Research conducted in Europe found that at each level of a health organization there is a different approach used to identify risks in the organization and that data from various sources must be integrated into executive-level risk management. This study found that there is no standard answer regarding specific risk identification tools or tools that are the same at the operational level. Each tool used in identifying various risks, especially in healthcare organizations, has the best approach to identify all risks with different tools, and these risks must be integrated through retrospective and prospective analysis to understand the broader scope of risks. All risks that have been identified require handling and will be integrated into executive management risks to be managed (Ferdosi et al., 2020).

The results of this study are also in line with the results of a study conducted in Nigeria, that several risk management models are used in child malnutrition management programs such as in Government Hospitals in Nigeria using a prism risk management model (Chinwah, 2020). Then in Indonesia, the Strong kids risk management model was used to identify the risk of malnutrition in sick inpatients and outpatients(Sidiartha & IGAPE, 2018). Furthermore, in Congo, it is shown that the Severe Acute Malnutrition (SAM) risk prediction model can be a simple and efficient tool to detect the risk of malnutrition in children under the age of 5 years in developing countries. The SAM predictive model is a useful and simple clinical tool for identifying people at risk, limiting high rates of malnutrition, and reducing child illness and mortality in Congo (Mukuku et al., 2019b). This is also in line with the use of risk management methods with rough analysis of SatScan which can detect the risk of stunting in showing areas of high risk groups for stunting cases, such as in southern Ethiopia that children who experience stunted in the identified spatial groups are more likely to come

from poor households, have younger mothers and are illiterate. and often the mother is a farmer and a housewife (Belayneh et al., 2021b).

Some of the other research results on stunting management programs in developing countries, stunting management programs are not only in the process of adding nutrients but stunting management strategies in interventions also through state food security, clean sanitation, especially for underprivileged residents and the availability of clean water. Stunting intervention programs in children also have different risk management models in identifying risks. In a study conducted in the United States, one of the stunting management programs is also through food safety interventions. This food safety program is carried out with the risk management model of the Stockholm paradigm and dama (document-assess-monitor-act). This risk management is realized through targeted interventions focused on information exchanged among the scientific community, food safety and public health policy practitioners, and local populations to mitigate any risks that have been detected and assessed for control so that the objectives in this program are achieved. Several risk management models are offered in identifying risks that arise in order to minimize failures of stunting treatment program goals (Trivellone et al., 2022).

Then, research conducted in Nigeria, Ethiopia, India and Mali conducted risk management in stunting management programs with a cost-benefit analysis calculation approach, calculating the effectiveness of stunting management programs that have been implemented and will be implemented. Cost-effectiveness models for addressing malnutrition are sufficiently sensitive to the cost-effectiveness of interventions that are sensitive to the study area can achieve a 20% reduction in child stunting and a 15% reduction in child mortality. This method is a material evaluation to determine the risk of the following year whether the policies and programs in this evaluation are feasible to continue in order to see the impact of this policy (Webb et al., 2021) .

### **RQ1 : How is the design of the Risk Management policy framework in the Stunting Reduction Acceleration Program?**

Based on 19 journals, the researcher compared the risk management framework with the SLR method related to the MR PPS Program. In table 1, it can be seen that hierarchically executive management in health organizations such as the Ministry of Health, uses the design of the ISO 3100 policy framework, but does not bind to the departments or units under it

to identify risks with specific tools in each unit such as using the SAM and Strongkids methods. The Health Sector, especially in the Hospital unit, has a screening tool to identify the risk of handling stunting in children that can see specifically the type of mitigation and control that is appropriate. The SAM method is used in developing countries, especially African regions such as Ethiopia and Nigeria, effectively in controlling the risk of stunting management. Strongkids can also be considered as a risk identification tool for handling stunting in hospitals in Indonesia, several health units in Indonesia prove that Strongkids is quite effective in using as a risk identification tool. However, this does not lock that each unit associated with the PPS Program identifies using identification standards with SAM and Strongkids, some countries still continue to collaborate, according to the needs of specific programs and sensitive interventions to detect risks such as the PPS program in food security interventions in the Americas. The food security program uses the stocholm prism and dama model tools to identify risks from various groups outside the government. Then there is also risk identification using the RBSSP method in sanitation programs for the poor. Based on the results of the above research, after the risk has been identified in each risk management unit, the risk must be integrated between the risks at the top management (strategic risk owner units) so that mitigation adjustments are made that produce the right behavior. To carry out this risk management policy process, the ISO 3100 policy design is a good answer to the policy framework to the communication process.

So from table 1, the MR policy framework design that is most often used in developing countries, in government, especially in top management such as the Ministry of Health, uses ISO 31000, and in the identification of risks in each work unit (operational risk ownership unit) using more specific risk identification tools in accordance with intervention programs in stunting management programs. In the field of Health, the most commonly used method is risk identification methods with SAM and Strongkids.

### **RQ2: How is the strategic implementation of the Risk Management Policy in the Stunting Reduction Acceleration Program?**

In the literature review that has been carried out, there is a strategic that all units must identify risks in accordance with the intervention area and risk owner units that have different characteristics and are not binding on one particular method and tool. Furthermore, the identification of this risk is integrated with top management as management that has strategic

risks so that control measures become mitigation that are aligned and can be monitored in accordance with the ISO 31000 policy framework. Then, in the implementation of MR, it is necessary to evaluate the PPS policy using the cost-effective analysis method, as one of the policy evaluation tools in calculating and assessing the effectiveness of this PPS program

## **CONCLUSION AND RECOMMENDATIONS**

Based on the results of the literature that has been reviewed by searching for keywords in academic databases. It was found that the implementation of PPS policies in various countries proves that stunting treatment programs are not free from risks in the implementation process. This risk can be an obstacle to achieving the goal of reducing stunting. Therefore, several countries implement policies related to risk management.

Risk management is integrative and in specific applications according to technical programs in stunting intervention. Specific and different risk identification tools are needed in each stunting treatment program. There is no uniformity of risk identification tools in risk management carried out by the operational unit as the unit that owns the risk.

Once the risks are identified and controlled, top management needs to integrate and refine the risks that have been identified by the operational risk ownership units. The design of effective risk management policies is used in top management, especially the Ministry of Health, using the ISO 31000 standard. ISO 31000 became an effective standard in top management. ISO 31000 provides guidance in providing risk management principles, risk management frameworks and effective risk management processes to improve performance, encourage innovation and support the achievement of goals, especially in stunting management programs in Indonesia.

## **REFERENCES**

- Agustina, W., & Hindun, N. (2023). Sosialisasi Pencegahan Stunting Dengan Makanan Hewani Pada Karyawan Global Collection Malang. *Anfatama: Jurnal Pengabdian Masyarakat*, 2(2), 103–106.

- Baracho, R. O., Bezerra, N. R., & Scalize, P. S. (2024). Proposition and Application of a Conceptual Model for Risk Management in Rural Areas: Rural Basic Sanitation Safety Plan (RBSSP). *Resources*, 13(7), 90.
- Belayneh, M., Loha, E., & Lindtjørn, B. (2021a). Spatial variation of child stunting and maternal malnutrition after controlling for known risk factors in a drought-prone rural community in Southern Ethiopia. *Annals of Global Health*, 87(1).
- Belayneh, M., Loha, E., & Lindtjørn, B. (2021b). Spatial variation of child stunting and maternal malnutrition after controlling for known risk factors in a drought-prone rural community in Southern Ethiopia. *Annals of Global Health*, 87(1).
- Chinwah, V. D. (2020). PRISMA Model for Improving Maternal-Child Healthcare Outcomes in Rivers State, Nigeria.
- Ferdosi, M., Rezayatmand, R., & Molavi Taleghani, Y. (2020). Risk management in executive levels of healthcare organizations: insights from a scoping review (2018). *Risk Management and Healthcare Policy*, 215–243.
- Gupta, R., Shankar, R., Lai, K.-H., & Kumar, A. (2023). Risk profiling of food security impediments using decision maker's behavioural preference towards operational risk management. *Annals of Operations Research*, 1–36.
- Hawkes, C., Ruel, M. T., Salm, L., Sinclair, B., & Branca, F. (2020). Double-duty actions: seizing programme and policy opportunities to address malnutrition in all its forms. *The Lancet*, 395(10218), 142–155.
- Hoai, T. T., Hung, B. Q., & Nguyen, N. P. (2022). The impact of internal control systems on the intensity of innovation and organizational performance of public sector organizations in Vietnam: the moderating role of transformational leadership. *Heliyon*, 8(2).
- Isanaka, S., Barnhart, D. A., McDonald, C. M., Ackatia-Armah, R. S., Kupka, R., Doumbia, S., Brown, K. H., & Menzies, N. A. (2019). Cost-effectiveness of community-based screening and treatment of moderate acute malnutrition in Mali. *BMJ Global Health*, 4(2), e001227.
- Mukuku, O., Mutombo, A. M., Kamona, L. K., Lubala, T. K., Mawaw, P. M., Aloni, M. N., Wembonyama, S. O., & Luboya, O. N. (2019a). Predictive model for the risk of

- severe acute malnutrition in children. *Journal of Nutrition and Metabolism*, 2019(1), 4740825.
- Mukuku, O., Mutombo, A. M., Kamona, L. K., Lubala, T. K., Mawaw, P. M., Aloni, M. N., Wembonyama, S. O., & Luboya, O. N. (2019b). Predictive model for the risk of severe acute malnutrition in children. *Journal of Nutrition and Metabolism*, 2019(1), 4740825.
- Priyarsono, D. S., & Munawar, Y. (2020). Pengembangan SDM untuk implementasi manajemen risiko: perspektif baru dari sudut pandang pengguna. *Jurnal Aplikasi Bisnis Dan Manajemen (JABM)*, 6(3), 478.
- Priyarsono, D. S., Widhiani, A. P., & Sari, D. L. (2019). Starting the implementation of risk management in a higher education institution: The case of IPB University. *IOP Conference Series: Materials Science and Engineering*, 598(1), 012107.
- Rahmi, E., Yumami, E., & Hidayasari, N. (2023). Analisis Metode Pengembangan Sistem Informasi Berbasis Website: Systematic Literature Review. *Remik: Riset Dan E-Jurnal Manajemen Informatika Komputer*, 7(1), 821–834.
- Sidiartha, I. G. L., & IGAPE, P. (2018). Implementation of STRONGkids in identify risk of malnutrition in government hospital. *Int J Heal Sci*, 2(2), 18–24.
- Sinha, D., & Sinha, S. (2020). Managing in a VUCA World: Possibilities and Pitfalls. *Journal of Technology Management for Growing Economies*, 11(1), 17–21. <https://doi.org/10.15415/jtmge.2020.111003>
- Sotiraki, M., Malliou, A., Tachirai, N., Kellari, N., Grammatikopoulou, M. G., Sergentanis, T. N., & Vassilakou, T. (2022). Burden of childhood malnutrition: a roadmap of global and european policies promoting healthy nutrition for infants and young children. *Children*, 9(8), 1179.
- Trivellone, V., Hoberg, E. P., Boeger, W. A., & Brooks, D. R. (2022a). Food security and emerging infectious disease: risk assessment and risk management. *Royal Society Open Science*, 9(2), 211687.
- Trivellone, V., Hoberg, E. P., Boeger, W. A., & Brooks, D. R. (2022b). Food security and emerging infectious disease: risk assessment and risk management. *Royal Society Open Science*, 9(2), 211687.

- Van Dinter, R., Tekinerdogan, B., & Catal, C. (2021). Automation of systematic literature reviews: A systematic literature review. *Information and Software Technology*, 136, 106589.
- Webb, P., Danaei, G., Masters, W. A., Rosettie, K. L., Leech, A. A., Cohen, J., Blakstad, M., Kranz, S., & Mozaffarian, D. (2021). Modelling the potential cost-effectiveness of food-based programs to reduce malnutrition. *Global Food Security*, 29, 100550.

The references section at IICIS must follow [APA Style 7th Edition](#), written in Garamond 12 pt, 1.5 spacing, regular font. All sources cited in the paper must appear here, and vice versa.

- Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (4th ed.). Sage Publications.
- Hyland, K. (2009). *Academic Discourse: English in a Global Context*. Continuum International Publishing Group.
- IICIS. (2025). *Author Guidelines for the 5th International Indonesia Conference on Interdisciplinary Studies (IICIS) 2025*. [Unpublished document].
- Smith, R. J. (2018). Writing for International Conferences. *Journal of Academic Practice*, 10(3), 200–210.