

Construction Government Policy Model of Papuan Indigenous Human Resources in Indonesian Border Area

Fitriani^{1*} , Martha Betaubun² , Hairulla³ 

¹ Faculty of Social and Politic Sciences, Universitas Musamus, Merauke, Papua, INDONESIA

² Faculty of Teacher and Education, Universitas Musamus, Merauke, Papua, INDONESIA, marthabetaubun75@gmail.com

³ Faculty of Engineering, Universitas Musamus, Merauke, Papua, INDONESIA, hairulla@unmus.ac.id

*Corresponding Author: fitriani310878@gmail.com

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ABSTRACT

The development of human resources (HR) of Indigenous Papuans (OAP) is a crucial factor in accelerating equitable development in South Papua Province, a region with complex geographical, social, and cultural characteristics. Despite the special autonomy policy providing affirmative space, the quality of OAP human resources remains low due to disparities in education, healthcare, and economic opportunities, as well as the absence of locally-based policy models that include active participation of indigenous communities. This study aims to formulate a governance policy model that is adaptive, responsive, and transformative, employing a participatory approach that respects local cultural values. Through qualitative methods and case studies, the research identifies the main obstacles to HR development for OAP and designs inclusive strategies covering culturally-based education, economic empowerment, health and nutrition services, strengthening traditional institutions, technological innovation, and integrated monitoring systems. This policy model is expected to sustainably enhance the capacity of OAP human resources, promote socio-economic integration, and improve the quality of life and participation of indigenous peoples in national development without compromising their cultural identity.

Keywords: Human Resources, Indigenous Papuans, Development

INTRODUCTION

Human resources (HR) constitute a crucial factor in the development of a region, especially in areas characterised by complex geographical, social, and cultural traits such as Papua, which shares direct borders with Australia and Papua New Guinea. Amid various efforts by the central government, including the granting of special autonomy and fiscal decentralisation, the quality and capacity of the Indigenous Papuan human resources (OAP) remain fundamental challenges obstructing development in Papua. One of the newly established provinces in 2022 (Law Number 14 of 2022), namely South Papua Province, is a division from Papua Province consisting of four regencies: Merauke, Mappi, Asmat, and Boven Digoel. The development challenge across all Papua regions is the advancement of human resources, particularly those of the Indigenous Papuans (OAP). Although the existence of the special autonomy policy (Otsus) has provided affirmative space and opportunities for the OAP to gain broader access in various sectors, realities on the ground reveal that the quality of OAP human resources remains low. Before delving further into OAP human resources, it is necessary to present a comparison between the general population and the OAP population in South Papua Province.

Table 1. Population and OAP in South Papua Province in 2010

No	Regency	Papuans (Man)	%	Non-Papuans (Man)	%	Total
1	Asmat	35.592	88,49	4.628	11,51	40.220
2	Boven Digoel	19.401	63,80	11.007	36,20	30.408
3	Mappi	37.326	87,28	5.439	12,72	42.765
4	Merauke	37.731	36,60	65.347	63,40	103.078
	South Papua Province	130.050	60,08	86.421	39,92	216.471

Source: Papua Statistics Bureau 2013

The total Indigenous Papuan population (OAP) in South Papua amounts to 130,050 individuals based on the 2010 OAP census, with an ongoing data update process conducted through the South Papua Indigenous People Information System (SIRIOS). According to the available official data, despite the considerable time gap in the period of data collection, the proportion of the OAP population relative to the overall population in South Papua Province stands at only 23%.

Table 2. Population and Indigenous Papuans (OAP) in South Papua Province

No	Regency	Population (Persons) in 2025	Indigenous Papuans (2010)	Percentage OAP
1	Merauke	255.168	37.731	15%
2	Boven Digoel	71.997	19.401	27%
3	Mappi	114.153	37.326	33%
4	Asmat	120.902	35.592	29%
	Total	562.220	130.050	23%

Source: South Papua Statistics Bureau 2025, Papua Statistics Bureau 2013

The Human Development Index (HDI) value specifically for Indigenous Papuans (OAP) is still unknown to date; official data only contains the HDI for the overall population of South Papua Province. Below is a comparison table of the total Human Development Index in Indonesia, Papua Province as the parent province, and South Papua Province.

Table 3. Comparison of Human Development Index (HDI) of Indonesia, Papua Province, and South Papua Province

No	Year	Indonesia	Papua Province	South Papua Province
1	2022	72,91	61,39	-
2	2023	74,39	63,01	68,24
3	2024	75,02	78,83	68,86
	Rank	34	34	35

Source: South Papua Statistics Bureau 2025

Although Papua is rich in natural resources, disparities in development and backwardness in various aspects of life, such as education, health, and economy, remain highly apparent, especially felt by the Indigenous Papuans (OAP). The table above shows an increase in the Human Development Index (HDI) every year, albeit not significant, with Papua Province and South Papua still ranking low compared to the HDI of 38 other provinces in Indonesia.

Table 4. Human Development Index (HDI) and Poverty Rate in South Papua Province, 2024

No	Regency	HDI	Poverty Rate (thousand persons)
1	Merauke	74,53	24,73
2	Boven Digoel	68,16	14,05
3	Mappi	61,66	27,18
4	Asmat	57,63	26,24
	Average/Total	68,86	92,20

Source: South Papua Statistics Bureau 2024

The low level of education, limited access to healthcare services, high poverty rate, and minimal participation of Indigenous Papuans (OAP) in the workforce and public policy-making are indicators that the human resource issues have not been addressed optimally.

Table 5. Comparison of Student Enrollment Number in Papua Province and South

No	Education Level	Papua Province	South Papua Province	Percentage
1	Kindergarten	9812	7460	76%

2	Playground	7333	3335	45%
3	Early Chilhood Education Programme	61	0	0
4	Primary School	114932	94172	82%
5	Junior Secondary School	51570	29243	56%
6	Senior Secondary School	35826	15155	42%
7	Vocational High School	13496	7338	54%
8	University	64153	16274	25%
	Total	297.183	172.977	58,2%

Source: South Papua Statistics Bureau 2024

The condition of education naturally affects the number of the workforce and the open unemployment rate in South Papua Province, as illustrated by the data below:

Table 6. Number of Workforce and Open Unemployment in South Papua Province

No	Regency	Workforce	Open Unemployment
1	Merauke	116.240	5.893
2	Boven Digoel	29.491	961
3	Mappi	41.231	1.692
4	Asmat	49.178	1.008
	Total	236.140	9.554

Source: South Papua Statistics Bureau 2024

In South Papua Province, there is also an imbalance in the number of Civil Servants (ASN) who are Indigenous Papuans (OAP), with only 30% of the total ASN being OAP, indicating that non-OAP still predominantly hold strategic sector roles.

Table 7. Number of Civil Servants (ASN) in South papua Province in 2023

No	Regency	Civil Servants (ASN)	Civil Servants (ASN) Indigenous Papuan (OAP)	Majority Education Level of Indigenous Papuan Civil Servants	Majority Education Level of Indigenous Papuan Civil Servants
1	Merauke	5.175	NA	NA	NA
2	Boven Digoel	3.774	2.015	41% S1/S2/S3	51% Gol. III
3	Mappi	2.875	1.482	36% SMA	46% Gol. II
4	Asmat	3.193	1.029	50% SMA	55% Gol. III
	Total	15.017	4.526		

Source: Study of Indigenous Papuans Civil Servants (ASN OAP) in Sout Papua Province in 2023

From the data of the 2023 Study of Indigenous Papuan Civil Servants (ASN OAP) in South Papua Province, it is known that Boven Digoel Regency has the highest number of ASN OAP, with the majority having completed higher education and most belonging to group III. Meanwhile, official data on ASN OAP in Merauke Regency is not yet available.

Table 8. Small and Medium Enterprise Industry Units in South Papua Province

No	Regency	Small Enterprise	Medium Enterprise	Industry	Hotels/ Accommodations	Restourants	Tourist Desninations
1	Merauke	1032	15	93	22	61	72
2	Boven Digoel	183	NA	NA	23	8	NA
3	Mappi	564	NA	NA	12	7	NA
4	Asmat	39	NA	NA	NA	83	NA
	Total	1818	15	93	57	159	72

Source: South Papua Statistics Bureau 2024

South Papua Province is known to have a considerable number of small industries spread across its four regencies, but their contribution to improving the welfare of the Indigenous Papuan community (OAP) is still felt to be suboptimal.

Table 9. Medical Personnel and Health Facilities in South Papua Province

No	Facility	Merauke Regency	Boven Digoel Regency	Mappi Regency	Asmat Regency
Health Facilities					
1	Hospitals	5	2	2	1
2	Public Health Centres	27	20	17	26
3	Auxiliary Public Health Centres	124	12	43	58
4	Pharmacies	16	3	4	3
	Total	172	37	66	88
Medical Personnel					
1	Doctors	54	48	43	43
2	Nurses	309	353	285	334
3	Midwives	297	225	215	212
4	Nutrition Expert	39	32	30	24
5	Pharmacists	38	51	44	44
	Total	737	709	617	657

Source: South Papua Statistics Bureau 2024

The availability of health facilities and medical personnel to date has not yet been able to fully serve the large population given the geographical conditions of South Papua Province. The government has formulated various affirmative policies, both through the Special Autonomy Law for Papua and regional policies, but implementation on the ground often faces obstacles such as weak coordination between agencies, lack of accurate data, and policy approaches that are not fully contextual and biased towards the social and cultural realities of the Indigenous Papuan community. Below are the affirmative policies that have been formulated.

Table 10. Affirmative Policies for Indigenous Papuans (OAP) in Papua Region

No	Type of Policy	Regarding
1	Law Number 21 of 2001	Special Autonomy for Papua Province
2	Law Number 2 of 2021	Second Amendment to Law Number 21 of 2001 on Special Autonomy for Papua Province
3	Government Regulation Number 106 of 2021	Institutional Authority Implementation of Papua Special Autonomy Policy
4	Government Regulation Number 107 of 2021	Reception, Management, Supervision, and Master Plan for Acceleration of Development under Papua Special Autonomy
5	Papua Special Regional Regulation Number 6 of 2011	Election of Governor and Deputy Governor
6	Papua Special Regional Regulation Number 10 of 2014	Strategic Program for Economic Development and Village Institutions
7	West Papua Special Regional Regulation Number 10 of 2019	Sustainable Development in West Papua Province
8	West Papua Special Regional Regulation Number 2 of 2021	Amendment to West Papua Special Regional Regulation Number 2 of 2019 on the Guidelines for Implementation, Receipt and Distribution of Papua Barat Special Autonomy Funds
9	West Papua Special Regional Regulation Number 2 of 2019	Guidelines for Implementation, Receipt and Distribution of Papua Barat Special Autonomy Funds
10	Papua Regional Regulation Number 5 of 2023	Procedures for the Election of Members of the Papua People's Assembly
11	Papua Special Regional Regulation Number 7 of 2016	Amendment to Papua Special Regional Regulation Number 6 of 2014 on Membership of the Papua People's Representative Council for the 2014-2019 Term by Appointment
12	Papua Special Regional Regulation Number 6 of 2014	Membership of the Papua People's Representative Council for the 2014-2019 Term by Appointment
13	Papua Special Regional Regulation Number 13 of 2016	Amendment to Papua Special Regional Regulation Number 25 of 2013 on Distribution and Management of Special Autonomy Funds
14	Papua Special Regional Regulation Number 25 of 2013	Distribution and Management of Special Autonomy Funds

15	Papua Special Regional Regulation Number 14 of 2016	Procedures for the Election of Members of the Papua People's Assembly
16	Papua Regional Regulation Number 16 of 2013	Ad Hoc Legal Commission
17	West Papua Regional Regulation Number 4 of 2016	Amendment to West Papua Special Regional Regulation Number 4 of 2012 on Membership and Number of Members of the West Papua People's Assembly
18	West Papua Special Regional Regulation Number 4 of 2012	Membership and Number of Members of the West Papua People's Assembly
19	West Papua Special Regional Regulation Number 2 of 2019	Guidelines for Implementation, Receipt and Distribution of Special Autonomy Funds in West Papua Province
20	Papua Special Regional Regulation Number 9 of 2019	Procedures for Filling Membership of the Papua People's Representative Council by Appointment for the 2019-2024 Term
21	Papua Special Regional Regulation Number 1 of 2011	Restoration of Rights for Papuan Women Victims of Violence and Human Rights Violations
22	West Papua Regional Regulation Number 5 of 2016	Requirements and Procedures for Election of Governor and Deputy Governor
23	West Papua Special Regional Regulation Number 6 of 2012	Guidelines for Implementation, Duties, Authorities, Rights and Obligations of the West Papua People's Assembly
24	Papua Special Regional Regulation Number 4 of 2010	Election of Members of the Papua People's Assembly
25	Papua Special Regional Regulation Number 8 of 2014	Special Handling of Remote Indigenous Communities
26	Papua Special Regional Regulation Number 9 of 2014	Procedures for Gubernatorial Consideration on International Agreements
27	Papua Special Regional Regulation Number 18 of 2008	People-based Economy
28	Papua Special Regional Regulation Number 19 of 2008	Protection of Intellectual Property Rights of Indigenous Papuans
29	Papua Special Regional Regulation Number 20 of 2008	Customary Courts in Papua
30	Papua Special Regional Regulation Number 21 of 2008	Sustainable Forest Management in Papua Province
31	Papua Special Regional Regulation Number 22 of 2008	Protection and Management of Natural Resources of Indigenous Papuan Communities
32	West Papua Special Regional Regulation Number 4 of 2019	Procedures for Filling Membership of the West Papua People's Representative Council by Appointment
33	West Papua Regional Regulation Number 5 of 2012	Protocol, Finance of Leaders and Members of the West Papua People's Assembly
34	Papua Special Regional Regulation Number 4 of 2019	Second Amendment to Papua Special Regional Regulation Number 25 of 2013 on Distribution and Management of Special Autonomy Funds
35	Papua Special Regional Regulation Number 23 of 2008	Customary Land Rights and Individual Rights of Indigenous Papuan Communities
36	Papua Special Regional Regulation Number 3 of 2008	Implementation of Rights and Duties of the Papua People's Assembly
37	Papua Special Regional Regulation Number 4 of 2008	Duties and Authorities of the Papua People's Assembly
38	Papua Special Regional Regulation Number 3 of 2013	Educational Services for Remote Indigenous Communities

Source: JIDH BPK

From the data presented, it is known that a special policy designated for Papua is the Special Autonomy Policy (Otonomi Khusus or Otsus). Otsus has been in effect for 22 years, starting with Law Number 21 of 2001, followed by Law Number 2 of 2021 concerning the Second Amendment to Law Number 21 of 2001 related to Special Autonomy for Papua Province. The implementation of the Special Autonomy Law, which includes a substantial budget, shows positive changes in infrastructure development (Articles 34, 36), education facilities (Article 56), and health. However, it cannot yet be said to have uplifted the dignity of the Indigenous Papuans (OAP). The term Indigenous Papuans refers to people from the Melanesian ethnic groups native to Papua Province and/or those accepted and recognised as Indigenous Papuans by the customary Papuan population. Another complicating factor is the limited availability of policy models genuinely based on local needs and respectful of the social and cultural

context of the Papuan community. Many policies are general or top-down, thus not fully addressing the structural challenges faced by OAP in developing their potential. The lack of involvement of the indigenous population in policy formulation and implementation weakens the effectiveness of government-launched human development programs. Additionally, an education system that is not contextually adapted, unequal basic services in remote areas, and limited continuous assistance for OAP in the formal sector deepen their social and economic exclusion.

In this context, a governance policy model is needed that is not merely affirmative but also transformative—one capable of dismantling structural inequalities and opening wide participation opportunities for OAP in planning, implementation, and evaluation of development policies. This research is crucial to explore and formulate more adaptive, responsive policy models rooted in local wisdom, so that human resource development policies in South Papua Province truly reflect social justice, empower OAP sustainably, and accelerate their integration into national development while preserving cultural identity. Given that South Papua Province is a new autonomous region, there is a significant opportunity to design more adaptive policies focused on strengthening the human resources of Indigenous Papuans. However, this requires in-depth study of the actual conditions, the effectiveness of existing policies, and public participation in policy formulation processes. Thus, this study aims to develop a responsive governance model addressing the human resource issues of Indigenous Papuans in South Papua Province. The research focuses on identifying primary barriers to OAP human resource development and formulating more effective, equitable, and sustainable policy approaches.

Urgensi

According to Dr Yohanis Ohoitimur, a public policy expert from Cenderawasih University, "Human resource development in Papua cannot be conducted with a uniform national approach. There must be a policy model based on the local context, culture, and social structure of the Indigenous Papuan community." This aligns with the view of Prof Adriana Elisabeth, a senior researcher at LIPI, who states that "the main problem in Papua's development is the state's failure to build trust and active participation of the indigenous people, including in education and employment." The central government has adopted an affirmative approach through the Special Autonomy Law for Papua (Law No. 2 of 2021), which emphasises the importance of involving Indigenous Papuans (OAP) in all development sectors, including education, health, and employment. However, in the context of South Papua as a new province, there is still no integrated policy model specifically targeting the development of OAP human resources, especially in the framework of regional autonomy and local wisdom. The development of human resources (HR) is a crucial strategic issue in Papua, particularly in South Papua Province, which was created by splitting from Papua Province through Law No. 14 of 2022. Though the regional split aims to accelerate equitable development and broaden the reach of public services, empirically the quality of Indigenous Papuan human resources remains concerning and lags significantly behind other regions of Indonesia.

Given this background, this research is essential to: identify fundamental problems in OAP human resource development in South Papua; analyse the effectiveness of policies currently implemented by the regional government; and formulate a contextual and sustainable policy model for overall OAP human resource development. This study is expected to contribute both theoretical and practical insights for regional government policy development, particularly in designing contextual, inclusive, and sustainable human resource development policies for OAP. Additionally, the research outcomes could serve as a reference for stakeholders in drafting affirmative regulations and programmes that uphold the fundamental rights of Indigenous Papuans as primary subjects of development in Papua.

RESEARCH METHOD

The research method used in this study is the survey method. A survey approach means this research is conducted to obtain facts, data, and factual information, and to try to describe the phenomena of the ongoing practice (Nazir, 1988). Data collection techniques are carried out by involving academics from UNMUS Merauke, the Papua Provincial Government, and the South Papua Provincial Government.

This study will conduct a Science Core Discussion and Survey in the form of Benchmarking to the parent province, where discussions, in-depth interviews, and direct observations will be carried out. The analysis method used in the research is the ASOCA Analysis Method (Ability, Strength, Opportunities, Culture, and Agility). The ASOCA analysis adds culture and agility as important elements in finding decision-making problem-solving strategies, which can be developed in response to changes, technological advancement, and evolving needs.

RESULT AND DISCUSSION

Human Resource Development (HRD) is a main pillar in improving the competitiveness of a region, especially in areas that have been historically lagging socially, economically, and politically like Papua. In South Papua Province – a new province formed by the split from Papua Province in 2022 – the issue of Indigenous Papuan human resources (OAP) is a crucial strategic matter that urgently requires systemic handling through inclusive and equitable government policies. According to the 2023 Papua Central Statistics Agency (BPS) data, school participation rates (SPR) for OAP in South Papua remain far below the national average, at just 62.3% for ages 16–18, compared to the national average of 85.9%. Meanwhile, the open unemployment rate (OUR) among productive age OAP is also high, at 13.7%, well above the national rate of 5.32%. These figures reflect the suboptimal implementation of policies supporting the quality improvement of OAP human resources.

Issues related to OAP human resources are strategic challenges in South Papua's development. The province's establishment aims to accelerate development and improve public service access, especially for OAP. However, disparities in human resources remain a major challenge limiting effective administration and inclusive development.

1Human Development Index (HDI) Gap Among OAP

Data from BPS South Papua in 2023 reported the HDI at 62.42, significantly below the national average of 74.39. Key components of HDI, especially education and per capita expenditure, indicate challenges with limited access to formal education, vocational training, and workforce qualifications. These challenges are compounded by high poverty levels, limited educational and health facilities, and low indigenous participation in development planning. As stated by Rumrus Basif et al. (2022), the low quality of human resources does not solely result from internal community factors but also from insufficiently effective government policies lacking cultural and social contextualisation, leading to ineffective and unsustainable outcomes

Unintegrated and Mismatched Policies

Research by Christian Titaley (2021) highlights that many HRD policies in Papua lack cross-sector integration and active local community participation. Policy misalignment among different government levels causes many HRD programs to miss their target. In South Papua's context as a new autonomous region, the absence of a specific policy model for OAP HRD represents a significant challenge in formulating medium-term development plans and sectoral policies.

Demographic Potential and Youth Challenges

Demographically, the working-age population in South Papua is increasing. Without sufficient HRD quality improvements, this demographic dividend could become a social burden. UNDP (2020) stresses the importance of HRD based on local wisdom, contextual education, and integrating modernity with Papuan culture. Managing this demographic dividend requires policies promoting active participation of OAP youth across development sectors. According to UNDP, successful HRD enhancement in local communities depends on policies that are contextual, locality-based, inclusive, and socially just.

Need for Adaptive and Responsive Policy Models

HRD approaches ignoring local wisdom, cultural values, and social structures risk widening inequality and reducing trust in government. Therefore, formulating governance policy models that are responsive, participative, and locally based is critical for addressing OAP needs in South Papua. To date, there is no comprehensively designed policy specifically targeting OAP HRD in South Papua. This study aims to develop governance policies responsive to local challenges while emphasising participatory, sustainable, and culturally rooted approaches.

Based on interviews and in-depth discussions with strategic stakeholders, academics, community leaders, and members of parliament captured in the ASOCA analysis regarding the human resource issues of Indigenous Papuans (OAP) on education, unemployment rate, health, government role, community, cultural customs, and affirmative policies, the findings are:

1. Ability

- OAP face limitations in access to higher education and the quality of education remains low in their regions
- The level of mastery of work skills and professionalism tends to be low due to minimal training and opportunities for further education.
- Poor health conditions with high rates of infectious diseases and malnutrition hinder the physical capability of OAP human resources to contribute optimally

2. Strength

- Local wisdom and strong cultural values form a social foundation that supports the solidarity of the OAP community..
- Government affirmative policies such as education and employment quotas for OAP provide a foundation for human resource enhancement
- The participation of indigenous communities and customary institutions preserves identity and encourages community involvement in development

3. Opportunities

- Central and regional governments give special attention through affirmative programs, scholarships, job training, and better health services
- Infrastructure and technological advancement open wider access to education and information for OAP
- Active international development partners and NGOs support capacity building and empowerment of OAP

4. Culture

- Rich and diverse local culture and customs are assets but sometimes act as barriers to adopting modern education and technology.
- Respect for customs forms strong social capital but requires synergistic adaptation with modern development values
- Social dynamics between indigenous communities and government, along with external influences, require culturally sensitive approaches
- Agility
- Adaptation to social and economic changes remains limited due to regional isolation and poor information access
- Government and OAP community efforts to respond through training and education programs show some agility but need strengthening
- The readiness of customary institutions and community organisations to collaborate with government and others on HR issues is still developing and requires acceleration.

The problems of OAP human resources are highly complex, with main challenges in access to and quality of education, health, and limited employment opportunities. Cultural strengths and affirmative policies provide a positive foundation but need to synergise with improved adaptability and collaboration among stakeholders. Efforts to accelerate OAP human resource development must integrate cultural approaches with enhanced access to education, health, utilisation of technology, and government affirmative programmes. Recommended policy models to realistically address Indigenous Papuan human resource issues should be comprehensive, contextual, and sustainable, focusing on improved access and quality of education, health, employment opportunities, and cultural respect. The policy models include:

1. Integrated Culturally-Based Education Policy

- Develop formal and non-formal curricula integrating OAP cultural values and local wisdom to make education more relevant and meaningful
- Expand higher education access by providing special affirmative scholarships for OAP and technology-based distance education programmes
- Build and improve education facilities in isolated areas with trained, culturally sensitive educators

2. Economic Empowerment and Employment Policy

- Promote skills training aligned with local market needs and regional potential, including local resource-based entrepreneurship
- Provide special employment quotas in regional development projects and support micro, small, and medium enterprises (MSMEs) owned by OAP
- Develop partnerships with private sector and donor agencies for financing and mentoring productive enterprises.

3. Special Health and Nutrition Policy

- Improve accessible basic health services, including prevention and treatment of endemic diseases and malnutrition
- Run health campaigns involving customary leaders and local communities to raise health awareness
- Provide special health insurance programmes for OAP not covered by national social security
- Strengthening Customary Institutions and Community Participation Policy

- Recognise and strengthen roles of customary institutions in local development planning and supervision to align with OAP values and needs
- Provide consultation spaces and community empowerment in policy and development programme decision-making

4. Technology and Infrastructure Innovation Policy

- Accelerate information and communication technology infrastructures to open access to education, information, and digital employment opportunities for OAP
- Develop inclusive, accessible digital learning and job training platforms

5. Sustainable Monitoring, Evaluation, and Funding Policy

- Establish participatory monitoring and evaluation systems involving local communities to measure programme effectiveness
- Allocate dedicated funds from national and regional budgets and seek international donor support to ensure programme sustainability.

This policy model must be implemented with cross-sector coordination and a culturally based approach to ensure relevance, community acceptance, and tangible impact on sustainably improving Indigenous Papuan human resource quality. The sustainable policy scheme consists of six components (Culturally-Based Integrated Education, Economic Empowerment and Employment, Special Health and Nutrition, Strengthening Customary Institutions and Community Participation, Technology and Infrastructure Innovation, and Sustainable Monitoring, Evaluation, and Funding). When matched with ASOCA, the policy model for OAP human resource enhancement is as follows:

Ability dan Strength (Education and Economic Empowerment).

Research by Marit (2019) emphasises the importance of economic empowerment strategies for OAP via development of local potential-based entrepreneurship, such as coffee industry support through capital provision, training, and specific market facilitation. This strengthens integrated economic empowerment and education policies prioritising cultural adaptation alongside skill development. The creative economy theory supports this with a focus on improving productive and innovative human resources tailored to the local context.

Opportunities (Government Role and Affirmative Policies).

Papua Provincial Government prioritises inclusive economic development and OAP empowerment by strengthening village community institutions and sustainably managing natural resources via cultural principles, alongside fulfilling basic infrastructure needs (roads, electricity, technology). This empowerment model aligns with Oos M. Anwas's (2014) community empowerment theory stressing community participation, competent facilitators, and respect for local wisdom.

Culture (Respect for Customs and Community Participation).

The Papua People's Assembly and customary institutions act as drivers for community-based empowerment that addresses socio-economic gaps, preserves cultural values, and encourages community participation in development.

Agility (Adaptation and Innovation)

Besides regional government support, grassroots economic development strategies promote OAP human resource quality improvement through training, adoption of appropriate technology, and diversification of local products demonstrating adaptive agility in facing modern socio-economic challenges.

This policy model underlines synergy between ability improvement, strengthening social-cultural capital (strength & culture), opportunities from affirmative policies, and adaptive agility. Sustained efforts involving government, customary institutions, and communities are key to empowering OAP human resources to keep pace with national and global development. Papua recognises seven customary regions: Mamberamo Tabi (Jayapura, Jayawijaya, Keerom, Sarmi, Mamberamo Raya), Saereri (Biak Numfor, Supiori, Yapen Islands, Waropen, parts of Nabire), Anim Ha (Merauke, Boven Digoel, Mappi, Asmat), La Pago (Jayawijaya, Pegunungan Bintang, Lanny Jaya, Tolikara, Nduga, Puncak Jaya, Yalimo, Yahukimo, Central Mamberamo, Puncak), Mee Pago (Nabire, Dogiyai, Deiyai, Paniai, Intan Jaya, Mimika), Domberai (Manokwari, Sorong, Bintuni, Wondama, etc.), and Bomberai (Bintuni, Fakfak, etc.). This study groups recommended programmes and policy products based on timeframes (short-, medium-, and long-term) aligned with customary regions in Papua. This grouping ensures programmes and policies are contextual, targeted, culturally respectful, and improve the effectiveness of Indigenous Papuan human resource development throughout Papua.

Table 11. Human Resource Development Programs for Indigenous Papuans (OAP) by Timeframe

Mamberamo Tabi Region			
No	Short Term (1-2 year)	Mediaum Term (3-5 year)	Long Term (5-10 year)
1	Maritime/fisheries-based skills training and small-scale entrepreneurship	Affirmative scholarships for students from Mamta	Encouraging advanced studies (Master's and Doctoral) focusing on marine research and culture
2	Integrated basic healthcare service improvement	Development of MSMEs (micro, small, and medium enterprises) based on marine products and local commodity products	Transforming education based on maritime culture and technology innovation
3	Local academic tutoring and support	Development of educational infrastructure and digitalisation of learning	Establishment of creative economy and marine innovation centres
4		Involvement of customary and religious leaders in cultural and educational socialisation	
Policy Product :			
1	Affirmative Education and Vocational Training Policy in Marine Sector		
2	Regulatory Protection for Cultural Category Mamta		
3	Financing and Licensing Facilitation for Fishermen and MSMEs		
4	Policy for Improving Internet Infrastructure and Digitalisation of Island Regions		
Saereri Region			
No	Short Term (1-2 year)	Mediaum Term (3-5 year)	Long Term (5-10 year)
1	Agricultural and local fisheries-based skills training	Development of schools with curricula based on Saereri culture and language	Vocational University Research in Agriculture and Fisheries
2	Child nutrition education and primary healthcare services	Scholarships with intensive academic mentoring	Digital and Transportation Infrastructure to Support Education and Economy
3		Empowerment of community-based MSMEs in agriculture and fisheries	Local Leadership and Political Programmes Grounded in Saereri Customary Values
4		Strengthening the role of customary and religious leaders in social development	
Policy Product :			
1	Affirmative education policies with cultural adjustment for Saereri		
2	Special funding regulations for training and micro-enterprises in Saereri		
3	Programs for protection of customs and recognition of Saereri customary law territories		
Anim Ha Region			
No	Short Term (1-2 year)	Mediaum Term (3-5 year)	Long Term (5-10 year)
1	agriculture and natural resource management skills training	Scholarships and Vocational Training (Food Technology and Animal Husbandry)	Higher education institution specialising in cultural research and agricultural development
2	Community-based health awareness and nutritional interventions	Establishment of Inclusive Education Centres Prioritising Anim Ha Culture	Agricultural technology ecosystem and digitalisation
3		Local Agricultural Entrepreneurship Mentorship	Capacity-building programmes for customary leaders and surrounding community members
4		Strengthening the Role of Customary Institutions in Development Planning	
Policy Product :			
1	Affirmative education and entrepreneurship policies for Anim Ha		
2	Recognition and protection policies for customary law and environmental resources		
3	Infrastructure development initiatives		
La Pago Region			
No	Short Term (1-2 year)	Mediaum Term (3-5 year)	Long Term (5-10 year)
1	Enhancement of urban and semi-urban vocational training	Scholarships and school quality improvement along with foreign language training	Higher education based on technology and creative business

2	Maternal and child health programmes and community education	Development of MSMEs based on services and trade	Digital and transport infrastructure to drive economic growth
3		Collaboration between customary leaders and communities in social and economic development	

Policy Product :

- 1 Affirmative policies supporting education and enterprise programmes in La Pago
- 2 Regulations protecting cultural heritage and improving public service quality
- 3 Programmes facilitating business licensing in La Pago region

Mee Pago Region

No	Short Term (1-2 year)	Mediaum Term (3-5 year)	Long Term (5-10 year)
1	Training on skills for artisanal mining and environmental management	Affirmative scholarships and vocational training in mining, engineering, and ecology	Higher education institutions related to mining science and environmental management
2	Health education and infectious disease risk reduction	Support for local MSME development and community cooperatives	Development of environmentally friendly technology for community welfare
3		Strengthening customary leaders' participation in industrial and social development	

Policy Product :

- 1 Affirmative regulations in mining and protection of customary rights
- 2 Environmental policy and the Mee Pago community empowerment programme
- 3 CSR fund distribution and environmental sustainability financing programmes

Domberai Region

No	Short Term (1-2 year)	Mediaum Term (3-5 year)	Long Term (5-10 year)
1	Forestry and marine-based skills training	Scholarships for students in natural resource and marine management	Scholarship programmes for students in natural resource and marine management
2	Health services, nutrition counselling, and disease prevention education	Development of MSMEs based on forest and fishery products with mentoring	Innovative technology in forest and marine product conservation and production
3		Strengthening the role of customary leaders and institutions in cultural preservation	

Policy Product :

- 1 Affirmative policies in the fields of environmental conservation and economic development in Domberai
- 2 Regulations for the protection of customary rights and support for educational infrastructure
- 3 Multisector partnership programmes for regional development

Bomberai Region

No	Short Term (1-2 year)	Mediaum Term (3-5 year)	Long Term (5-10 year)
1	Basic skills training in marine, fisheries, and agriculture	Provision of scholarships for education and vocational training in agriculture and marine sectors	Applied higher education in marine science and conservation
2	Integrated health services with a focus on remote areas	Assistance for MSMEs in marine products and agroforestry	Development of digital and transport infrastructure in the Bomberai region
3		Involvement of customary leaders in cultural preservation and social education	

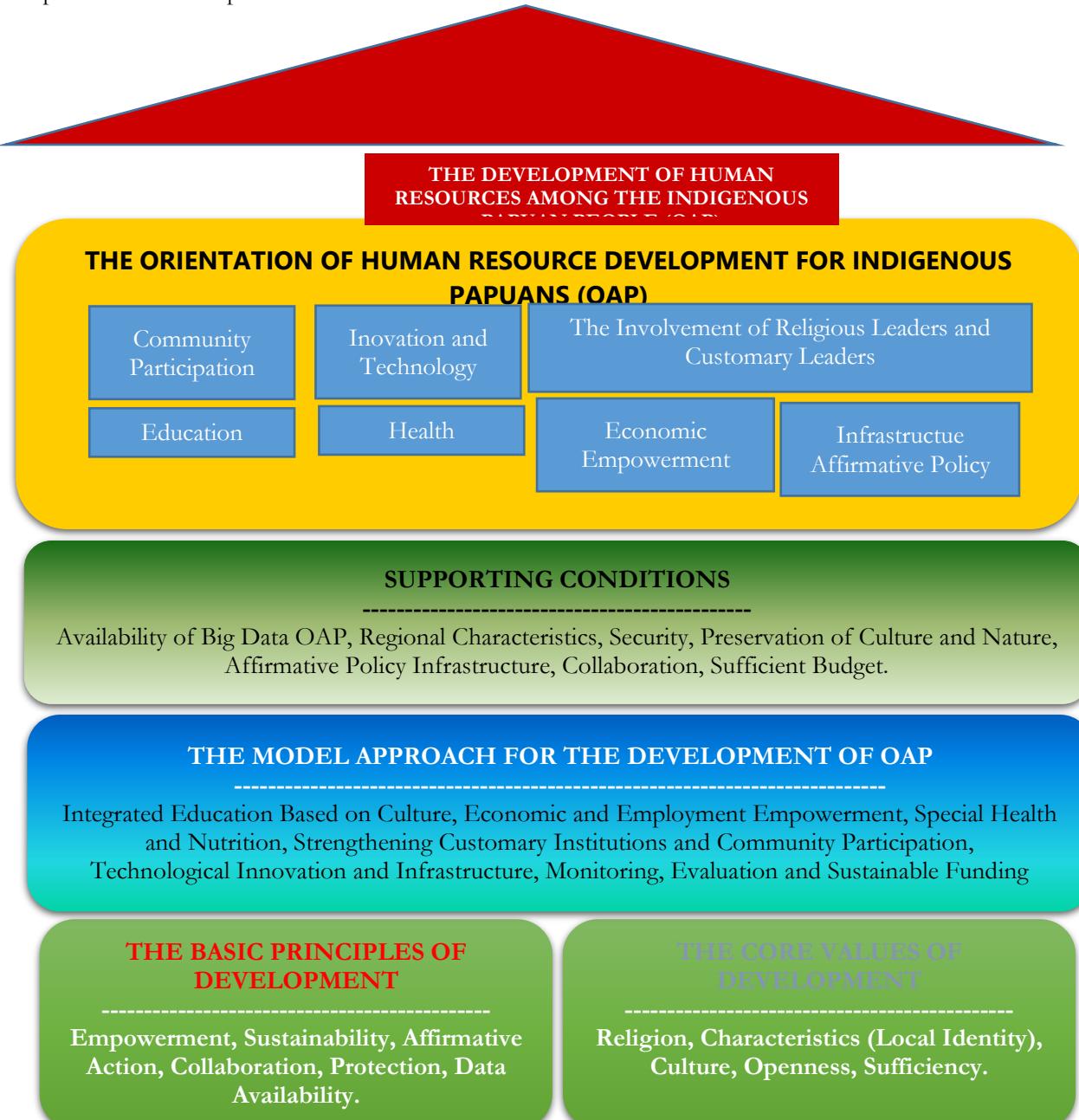
Policy Product :

- 1 Affirmation policies in cultural-based education and economy in Bomberai
- 2 Protection of customary rights and programmes to improve access to basic services
- 3 Regulations on funding and strategic partnerships for sustainable development

General Principles for Managing Programs and Policies Based on Customary Regions:

1. Active involvement of customary institutions, religious leaders, and local communities as implementation partners
2. Utilisation of local data and research for programme adjustment and success evaluation
3. Collaboration between central and regional governments, private sector, and donors adopting a cultural approach
4. Continuous monitoring and evaluation using local wisdom indicators and human resource development as benchmarks.

Administratively, Papua is divided into 6 provinces: Papua (including Jayapura City, Jayapura Regency, Sarmi, Keerom, Mamberamo Raya, Waropen, Yapen Islands, Biak Numfor, and Supiori), West Papua (Manokwari, South Manokwari, Arfak Mountains, Wondama Bay, Bintuni Bay, Fakfak, Kaimana), South Papua (Merauke, Asmat, Mappi, Boven Digoel), Southwest Papua (Sorong City, Sorong Regency, South Sorong, Tambrauw, Maybrat, Raja Ampat), Central Papua (Nabire, Panai, Deiyai, Dogiyai, Mimika, Intan Jaya, Puncak Regency, Puncak Jaya), and Highland Papua (Jayawijaya, Lani Jaya, Yahukimo, Yalimo, Tolikara, Nduga, Mamberamo Tengah, and Pegunungan Bintang). According to the research focus on human resource development of the Indigenous Papuan people, specifically in South Papua Province (the customary area of Anim Ha), which is situated along the border between Papua New Guinea and Australia, the framework model for Indigenous Papuan human resource development in South Papua is as follows :



Based on the above illustration, the focus is on the integrated development of Indigenous Papuan Human Resources (SDM OAP), especially in South Papua Province, as a strategic priority to accelerate overall SDM OAP development in Papua. The development orientation consists of seven pillars: (1) Community participation (active involvement of OAP in planning and supervision to ensure targeted development outcomes), (2) Education (strengthening access and quality from early childhood to higher education), (3) Innovation and technology (digitalising education and job training to support education, economy, and social life), (4) Health (improving and

expanding basic, preventive, and promotive health services for OAP communities), (5) Economic empowerment (providing job training, developing SMEs, local economy, and mentoring), (6) Involvement of religious and customary leaders (supporting policies, socialisation, and cultural value preservation; leaders drive the integration of cultural and social values in development policy), and (7) Infrastructure and affirmative policies (developing basic infrastructure and applying affirmative policies).

Supporting conditions critical to effective SDM OAP development in South Papua include : (1) Availability of Big Data on OAP for planning basis, (2) Regional characteristics, (3) Environmental security, (4) reservation of culture and nature as identity and social strength, (5) Adaptive infrastructure and affirmative policies, (6) Multi-stakeholder collaboration among government, private sector, and communities, (7) Adequate funding to ensure sustainability and optimisation. The SDM OAP development model consists of six types : (1) Integrated education based on culture, with culturally relevant and accessible curricula, (2) Economic empowerment and employment, enhancing work skills and supporting young OAP entrepreneurs, (3) Special health and nutrition interventions grounded in community health, (4) Strengthening customary institutions and community participation with customary involvement in policies, (5) Technological innovation and infrastructure utilisation, improving access even to remote areas, and (6) Ongoing monitoring, evaluation, and sustainable funding to ensure continuous oversight and budget guarantees. This whole development framework can only succeed if founded on the basic principles and core values that provide moral and social foundation : (1) Basic principles (empowerment, sustainability, collaboration, protection, affirmative action, and data availability), and (2) Core values (religion, regional characteristics and culture, openness, and adequacy).

The SDM OAP development must be holistic, based on active participation, culture-based, integrated with education, health, and economic sectors, supported by infrastructure and affirmative policies with sustainability and collaboration principles. Data, protection, and justice principles must back every component, ensuring real empowerment for Indigenous Papuans. Independent monitoring and evaluation are essential for impactful and adaptive development in line with Papua's social characteristics. Thus, an integrated SDM OAP development programme can address short, medium, and long-term challenges and lay the foundation for sustainable progress in Papua:

Table 12. SDM OAP Development Programmes by Priority Timing in South Papua Province

No	Short Term (1-2 tahun)	Medium Term (3-5 tahun)	Long Term (5-10 tahun)
1	<i>Self-development training and character education</i>	<i>Strengthening formal and non-formal education</i>	<i>Increasing access to and quality of higher education</i>
	Soft skills training in leadership, discipline, communication, and strengthening character among Indigenous Papuan youth	Affirmative scholarship provision (high school to postgraduate), partnerships with universities, and support for inclusive educational facilities for Indigenous Papuans	Encouraging more Indigenous Papuans to pursue bachelor's to doctoral degrees both domestically and abroad through scholarships and intensive mentoring
	Motivation and discussions to explore self-potential and local needs, with culture-based character development	Integration of local culture-based curriculum for the preservation of Papua's values and norms	Developing vocational universities based on local research and innovation in Papua
2	<i>Skills training</i>	<i>Developing and mentoring Micro, Small, and Medium Enterprises (MSMEs)</i>	<i>Transforming digital and telecommunications infrastructure</i>
	Practical training (craftsmanship, appropriate technology, digital marketing, hydroponics, entrepreneurship, etc.) to enhance job readiness	Economic empowerment programs including MSME training, microfinance, market access assistance, and entrepreneurship training based on local potential	Expanding digital infrastructure to support remote learning, digital health services, and technology talent development in Papua
3	<i>Academic support and tutoring</i>	<i>Advanced vocational training</i>	<i>Community-based health reform</i>
	Structured study guidance and consultation services for Indigenous Papuan students to improve academic performance	Advanced vocational training in strategic fields such as agriculture, fisheries, digital technology, and public health	Long-term programmes to improve Indigenous Papuans' health quality, including modern community health centres, regional hospitals, and sustainable nutrition services

4	<i>Improving access to basic health services</i>	<i>Improving education and health infrastructure</i>	<i>Strengthening local leadership and policy participation</i>
	Health campaigns, nutrition education, examinations, and free medical services in villages.	Building child-friendly schools, community libraries, village health facilities, and clean water infrastructure	Enhancing the capacity and role of Indigenous Papuans in government, customary institutions, universities, and social organisations to ensure just and sustainable development
		Developing male and female student dormitories at district, regency, and city levels	
5	<i>Development and management of student dormitories</i>	<i>Revitalisation of the Role of Customary and Religious Leaders</i>	<i>Creating a sustainable innovation ecosystem</i>
	Facilitation of dormitories in study cities, including supervision and character-building activities within the dormitory environment	The involvement of customary and religious leaders in education, social advocacy, and local community empowerment is vital.	Incubating creative businesses and research, collaborating with the private sector and international partners to accelerate the independence of Papua's human resources.
Program Management Principles :			
<ol style="list-style-type: none"> 1. Monitoring, Evaluation, and Integrated Data: All programmes must include periodic monitoring, evaluation, and be based on Indigenous Papuan Big Data to ensure effectiveness and sustainability. 2. Multi-Stakeholder Collaboration: Engage government, private sector, Indigenous communities, religious leaders, and universities across sectors 3. Local Culture-Based: Each programme emphasises the unique values, norms, and local wisdom of Papua as the foundation for strengthening human resources. 			

To support these programmes, integrated and interconnected policy products are needed to provide protection and affirmative support for the development of Indigenous Papuan Human Resources (SDM OAP), particularly in South Papua Province, which are consistent, inclusive, sustainable, and in line with the needs of OAP communities, including:

1. Affirmative Higher Education Policy

- **Affirmative Scholarships Dikti (ADik):** Provide full scholarships for Indigenous Papuan students to pursue undergraduate to doctoral studies outside Papua, with administrative support and social adaptation training.
- **Special Quota for Indigenous Papuans:** Special admission pathway in state universities ensuring access to quality education.

2. Skills Development and Training Policy

- **Vocational and Skills Training Directive:** Mandate education and labour departments to conduct MSME, digital skills, and practical work training for Indigenous Papuans, supported by central and regional funds.
- **Career Mentorship Program:** Regional governments provide mentoring for training alumni to prepare for employment and foster independent creativity.

3. Local Customary Protection and Recognition Policy

- **Integration of Papuan Culture in Curriculum:** Auditable regulations mandating local culture and language teaching materials for primary to secondary education
- **Customary Rights Protection:** Regional regulations recognising and protecting the rights of customary institutions, religious leaders, and communities in human resource development.

4. MSME and Local Economy Development Policy

- **Special Microfinance Regulation:** Fiscal and regulatory support easing credit access, start-up financing, and subsidies for community-based small enterprises
- **Simplified Business Licensing for Indigenous Papuans:** Affirmative, simplified licensing, registration, and business incubation processes

5. Infrastructure and Information Technology Policy

- **Priority for Education and Health Infrastructure Development:** Budgeting and acceleration of school, hospital, community health centre, polytechnic, and village internet network construction
- **Digital Learning Program:** Regional regulations supporting digital platforms for Indigenous Papuan education and training.

6. Nutrition and Health Policy

- **Special Health Insurance Guarantee for Indigenous Papuans:** Regional health insurance/BLUD covering Indigenous Papuans, prioritising remote area interventions
- **National and Local Nutrition Programs:** Regulations and policies for healthy food provision for Indigenous Papuan children and nutrition education in schools and villages.

7. Governance and Customary Participation Policy.

- **Strengthening Customary Institutions and Religious Leaders' Roles:** Regional regulations or gubernatorial decrees mandating the involvement of customary institutions, religious leaders, districts, and villages in all human resource development programs
- **Sustainable Monitoring, Evaluation, and Funding Program:** Regulations for multiparty oversight systems, big data-based program audits, and dedicated Indigenous Papuan human resource budgets from central and regional government funds.

The implementation of the Indigenous Papuan Human Resources (SDM OAP) development framework model and its main programmes, supported by coherent policies, is projected to result in a highly skilled, competitive, and actively contributing Indigenous Papuan generation in the next 20-30 years. This vision is backed by strong commitments from the government and stakeholders focusing on crucial life stages from the beginning. By 2045, the SDM OAP in South Papua Province is expected to be:

1. **Highly Educated and of Superior Quality:** A significant number of Indigenous Papuans will obtain higher education up to master's and doctoral levels both within Indonesia and abroad, matching national and global standards
2. **Independent and Productive:** Mastery of technical skills, entrepreneurship, and technological innovation aligned with local resources and modern industry
3. **Healthy and Well-Nourished:** Significant improvements in health and nutrition from interventions starting in pregnancy, infancy, and accessible, quality health services throughout Papua
4. **Culturally Rooted and Aware:** Strongly grounded in Papuan values and customs, maintaining local identity while open to modernisation and globalisation
5. **Actively Participating in Governance and Social Spheres:** Increasing roles in government, customary institutions, social organisations, and policy development
6. **Economically Developing Locally:** Sustainable local economic growth based on marine resources, agriculture, tourism, and creative industries in indigenous territories
7. **Competitive and Inclusive:** Able to compete nationally and internationally without compromising humanity and Papuan culture.

Key supporting factors and strategies include: (1) Holistic, phased interventions in education, health, economy, and culture integrated with affirmative policies and customary rights protection, (2) Digital transformation and infrastructure development reaching even remote areas, (3) Data-driven monitoring and evaluation using big data for responsive and adaptive programme management, and (4) Multi-stakeholder collaboration involving central and regional governments, private sectors, customary leaders, civil society, and international donors. In summary, Indigenous Papuan Human Resources 20-30 years from now will be intelligent, healthy, independent, culturally robust, and ready to contribute nationally and globally, paving the way for a sustainable and prosperous future for Papua.

CONCLUSION

The development of Indigenous Papuan Human Resources (SDM OAP) is a crucial strategic issue, especially in the newly formed South Papua region. Despite special autonomy and affirmative policies providing greater opportunities for OAP, their human resource quality remains low, posing a major obstacle to development. The Human Development Index (HDI) in South Papua is relatively low compared to other Indonesian provinces, with significant limitations in education, health, and employment access. Existing policies tend to be top-down and do not fully incorporate local wisdom or involve indigenous communities, reducing their effectiveness. An effective policy model should be comprehensive, contextual, and sustainable, covering cultural-based education strengthening, economic and employment empowerment, improvements in health and nutrition services,

strengthening customary institutions and community participation, technological and infrastructural innovation, as well as continuous monitoring and funding. This approach must integrate cultural values, evidence-based data, and multi-stakeholder collaboration. By implementing such policy models, the SDM OAP in 20-30 years is projected to become a highly educated, independent, culturally strong, healthy, globally competitive generation, actively contributing to both national and regional development. Holistic and just SDM OAP development will lay the foundation for sustainable progress in Papua without losing cultural identity.

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