

Collaborative Governance in the Implementation of Regional Sports Design: Realizing Sustainable Sports Governance in East Java

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Abstract: This study examines the implementation of collaborative governance principles in the Regional Sports Design of East Java as a strategic approach to achieving sustainable and inclusive sports management. The application of collaborative governance involves multiple stakeholders, including local governments, the Indonesian National Sports Committee, the Indonesian National Paralympic Committee, the private sector, universities, and the broader community, in the formulation of adaptive and data-driven sports policies. This research analyzes five key dimensions starting conditions, institutional design, leadership, collaborative processes, and outcomes emphasizing the importance of inter-actor collaboration, capacity building among stakeholders, and transparency in decision-making. The findings indicate that effective collaboration among diverse actors enhances the equitable distribution of sports facilities, strengthens athlete development, and ensures the long-term sustainability of regional sports programs. Furthermore, this governance approach promotes inclusivity in disability sports by providing equal access for persons with disabilities to participate and compete at national and international levels. Overall, the study concludes that collaboration-based sports governance is essential for achieving sustainable, inclusive, and collectively beneficial outcomes in the long term.

Keywords : Collaborative Governance; Sports Policy; Regional Sports Management; Inclusivity; Sustainable Development

INTRODUCTION

The implementation of National Sports is currently faced with the complexity and demands of rapid global change as well as the need to adapt to international dynamics.¹ Exercise not only plays a role in improving physical and mental health, but also as a tool to strengthen social relationships, shape character and improve the quality of life of the community as a whole.² Therefore, sports become an important aspect in the social,

¹ Thompson, A., & Parent, M. M. (2021). Understanding the impact of radical change on the effectiveness of national-level sport organizations: A multi-stakeholder perspective. *Sport Management Review*, 24(1), 1–23. <https://doi.org/10.1016/j.smr.2020.04.005>

² Winartin, S., Widiyanto, W., Manihuruk, F., & Manihuruk, P. K. A. (2023). The Role of Sport in Improving Physical Health and Fitness: A Literature Study. *International Journal of Multidisciplinary Research and Analysis*, 06(03). <https://doi.org/10.47191/ijmra/v6-i3-18>



cultural, educational, and economic development of a country.³ In this context, sports must be able to guarantee equal opportunities for exercise, quality improvement, and efficient and sustainable management.⁴ According to the Sports Law, the main purpose of Sports is to maintain and improve health, fitness, achievement, intelligence, and human quality holistically.⁵ In addition, Sports also aims to instill moral values such as sportsmanship and discipline, which are important in social life.⁶ To achieve this goal, the sports implementation system includes various aspects such as regulation, education, training, coaching, development, supervision, and evaluation that must be carried out in an integrated manner.⁷

The National Sports Big Design is a long-term planning document that contains the direction of the sports development and development policy in Indonesia. The National Sports Grand Design is designed to ensure that the implementation of sports in Indonesia can run effectively, efficiently, measurable, systematically, accountable, and sustainably.⁸ In its implementation, the National Sports Grand Design includes the fields of Educational Sports, Community Sports, Achievement Sports, and Sports Industry. As a continuation of the National Sports Grand Design, every Regional Government, both at the provincial and district/city levels, has the obligation to compile and implement the Regional Sports Design.⁹ This Regional Sports Design is prepared to adjust national policies with the potential and conditions of local areas, as well as to accelerate the implementation of sports policies at the local level. One of the key elements in Regional Sports Design is the development of superior sports.¹⁰

Superior sports are sports that are selected based on regional potential and opportunities to achieve achievements at the national and international levels. The selection of the leading sports branch must

³ Gulmatova, E. N. (2022). The impact of sport and sporting events on society, economy and international cooperation of countries. *Voprosy Kul'turologii (Issues of Cultural Studies)*, 4, 309–312. <https://doi.org/10.33920/nik-01-2204-03>

⁴ Adami, P. E., & Fitch, K. (2021). The Innovative Role of Olympic Sports and Exercise in The Promotion of Health, Gender Equality and Sustainability: Past Achievements and Future Challenges. *The Journal of Sports Medicine and Physical Fitness*, 61(8). <https://doi.org/10.23736/S0022-4707.21.12721-5>

⁵ Selviani, I., Prasetyo, T., Candra, O., Rizal, Y., Kurniawan, R., & Alsyaifa Putra, R. (2024). Activities and Involvement in Sports have a Significant Impact on Life: A Descriptive Analysis. *International Journal of Research and Innovation in Social Science*, VIII(VIII), 1926–1934. <https://doi.org/10.47772/IJRIS.2024.8080140>

⁶ Afriyundi, A. R., Satria, T., Rakhmat, C., & Carsiwan, C. (2025). Increasing Moral Values Through Sports: Systematic Literature Review. *Mamaos:Journal Physical Education, Sport and Art*, 1(2), 67. <https://doi.org/10.35194/mj.v1i2.4998>

⁷ Nastas, N., & Lungu, E. (2022). The Importance of Sports Management Consulting. *Bulletin of the Transilvania University of Braşov. Series IX: Sciences of Human Kinetics*, 115–122. <https://doi.org/10.31926/but.shk.2022.15.64.1.13>

⁸ Donny, R., Purnomo, A., Ma'mun, A., Mulyana, B., & Nuryadi, N. (2025). Policy analysis of coaching and development of achievement sports in South Sumatra province Indonesia. *Retos*, 68, 2058–2071. <https://doi.org/10.47197/retos.v68.116872>

⁹ Ramadhan, M. G., Ma'mun, A., Nuryadi, N., & Juliantine, T. (2023). Sports Policy on The Scope of Educational Sports Development Patterns: An Analysis Study. *JUARA: Jurnal Olahraga*, 8(1), 443–457. <https://doi.org/10.33222/juara.v8i1.2420>

¹⁰ Perfiliev, S. V., & Pshenitsyn, V. P. (2025). Indicators of Regional Programs For The Development of Physical Culture and Mass Sports in The Central Federal District. *Modern Technologies in Science and Education. MTSE-2025*, 208–211. <https://doi.org/10.21667/978-5-7722-0429-0-208-211>

consider various factors, including community interest, natural resources, and existing infrastructure.¹¹ The development of superior sports requires a structured approach and based on sport science, which involves disciplines such as physiology, biomechanics, psychology, and nutrition to optimize athlete training.¹² The importance of talent scouting or talent monitoring in this process cannot be ignored. The talent scouting process is carried out to find talented athletes from an early age, through tests, selection, and observation in competitions.¹³ With a good talent monitoring system, regions can more easily identify athletes who have the potential to develop into outstanding athletes. The sport science-based approach supports this process by providing accurate and research-based data to design a more appropriate training program, as well as prevent injuries that can hinder the development of athletes¹⁴.

The application of science and technology in sports is very important to support the management of sports facilities, equipment, and more effective training methods.¹⁵ The use of big data to monitor and analyze athlete performance can provide a deeper insight into the strengths and weaknesses of athletes in training, as well as help in adjusting the training program to be more optimal.¹⁶ In addition to Achievement Sports, it is also important to pay more attention to Sports for People with Disabilities. Disability sports are an important part of an inclusive sports system, which provides equal opportunities for people with disabilities to participate in sports activities. Disability sports require a special approach in terms of coaching, facilities, and competitions that must be adjusted to the physical condition and needs of disabled athletes. In Regional Sports Design, there needs to be a program that focuses on sports coaching for people with disabilities, ensuring they get equal access to practice, compete, and achieve achievements.

This research aims to analyze the implementation of collaborative governance in Regional Sports Design in East Java that can support the realization of sustainable sports implementation. The main focus of this research is to explore the role of developing superior sports, sport science, talent scouting, as well as science and technology in improving the quality of sports, both at the regional and national levels. In addition, this research will also highlight how disability sports as one of the subjects that receive benefits from the implementation, so that it can increase the achievement opportunities for athletes with disabilities at the national and international levels. The application of sport science that is tailored to the physiological needs

¹¹ Telaumbanua, B. R., Siagian, M. A., Waruwu, P., Hulu, T., Sarohia, J. C., & Nurkadri, N. (2024). Strategi dan Dedikasi Dalam Olahraga Prestasi. *AR-RUMMAN: Journal of Education and Learning Evaluation*, 1(2), 301–306. <https://doi.org/10.57235/arrumman.v1i2.4000>

¹² Masayu Rizka Risjanna, Novrizal Achmad Novan, Syifa F. Syihab, & Dery Rimasa. (2025). Competency Model of Sports Coaches in Multi-discipline Coaching Science. *Bravo's: Journal of Physical Education and Sport Science*, 13(Special Issue 2), 408–417. <https://doi.org/10.32682/bravos.v13si2/149>

¹³ Zhao, J., Xiang, C., Kamalden, T. F. T., Dong, W., Luo, H., & Ismail, N. (2024). Differences and Relationships Between Talent Detection, Identification, Development and Selection in Sport: A Systematic Review. *Heliyon*, 10(6), e27543. <https://doi.org/10.1016/j.heliyon.2024.e27543>

¹⁴ Astuti, Y., Erianti, & Supendra, D. (2023). Pendampingan Deteksi Bakat Olahraga Bolavoli Berbasis Online Webplatform Siswa Sekolah Dasar di Kota Padang. *Jurnal Widya Laksana*, 12(2), 249–261. <https://doi.org/10.23887/jwl.v12i2.66759>

¹⁵ Kharis Fajar, M., Jatmiko, T., Ashadi, K., & Rusdiawan, A. (n.d.). *Pengembangan Roadmap Penelitian Kepelatihan Olahraga untuk Menyiapkan Pelatih Fisik Berbasis IPTEK*. <https://doi.org/10.24036/patriot.v%vi%i.847>

¹⁶ Yarmolenko, M., Yakovenko, O., Stroganov, S., Lut, I., & Pinchuk, V. (2025). Application of Big Data Analytics in The Training Process of Athletes. *Scientific Journal of National Pedagogical Dragomanov University. Series 15. Scientific and Pedagogical Problems of Physical Culture (Physical Culture and Sports)*, 7(194), 222–227. [https://doi.org/10.31392/UDU-nc.series15.2025.07\(194\).46](https://doi.org/10.31392/UDU-nc.series15.2025.07(194).46)

of disabled athletes, along with appropriate exercise equipment and aids, is very important to optimize their abilities. Collaboration between Regional Government, sports organizations, private sector, academics, and the community through the implementation of Collaborative Governance will create an inclusive, effective, and sustainable sports ecosystem, supporting the development of all sports, including disability sports ¹⁷

METHOD

This research uses a qualitative approach with a literature study method to analyze the implementation of Regional Sports Design in East Java through the Collaborative Governance perspective, developed by Ansel & Gash, 2008 cited.¹⁸ This approach allows researchers to explore the dynamics of collaboration between various actors, such as local governments, the private sector, sports organizations, academics, and the community, in sustainable sports management. The main data source of this study consists of primary and secondary data. Primary data was obtained through in-depth interviews with selected informants using purposive sampling techniques. Informants consist of various stakeholders involved in the planning and implementation of Regional Sports Design policies, such as the Regional Government (Dinas Kepemudaan dan Olahraga dan Dinas Kesehatan), Indonesian National Sports Committee, National Paralympic Committee Indonesia, sports organizations, universities, the private sector, and sports communities. Secondary data sources are obtained from related documents, such as policies, regulations, regional strategic planning documents, and Collaborative Governance implementation reports in the sports sector.¹⁹

he data collection procedure is carried out through two main stages, namely literature study and in-depth interviews. In the literature study stage, researchers collect related documents related to policies, regulations, and regional strategic planning documents involving sports, as well as reports that describe the implementation of Collaborative Governance in the sports sector. In addition, literature that is relevant to Collaborative Governance theory and sport science is also used to deepen the understanding of the research topic. At the interview stage, researchers conduct in-depth interviews with informants to explore their views, experiences, and perspectives on inter-actor collaboration, challenges faced, and proposed solutions to improve sports management in the region.²⁰

The data analysis technique in this study uses a qualitative approach with thematic analysis. The first step is the identification and classification of data obtained from literature studies, which are then grouped based on four dimensions of Collaborative Governance: structural-institutional, procedural, relational, and output-outcome. Furthermore, the findings that emerged from the data were codified to make the analysis easier. Data triangulation is carried out to ensure the validity of research results by comparing data obtained from various sources, such as policy documents, regulations, implementation reports, and related literature. After that, the collected data will be interpreted and synthesized to formulate an effective Collaborative

¹⁷ Kurniawan, A., & Rizky Samudro, B. (2024). Optimizing Social and Economic Inclusion through Adaptive Sports Programs for Persons with Disabilities: A Pathway to Achieving SDGs. *International Journal of Current Science Research and Review*, 07(05). <https://doi.org/10.47191/ijcsrr/V7-i5-67>

¹⁸ Voets, J., Brandsen, T., Koliba, C., & Verschuere, B. (2021). Collaborative Governance. In *Oxford Research Encyclopedia of Politics*. Oxford University Press. <https://doi.org/10.1093/acrefore/9780190228637.013.1419>

¹⁹ Meier, H. E., & García, B. (2021). Beyond Sports Autonomy: A Case for Collaborative Sport Governance Approaches. *International Journal of Sport Policy and Politics*, 13(3), 501–516. <https://doi.org/10.1080/19406940.2021.1905035>

²⁰ Achmad, G., Wijaya, C., & Jannah, L. M. (2023). Collaborative Governance Concept on Youth Football Governance in Indonesia. *Journal of Law and Sustainable Development*, 11(11). <https://doi.org/10.55908/sdgs.v11i11.909>

Governance model in the implementation of Regional Sports Design. The results of this analysis are expected to produce strategic recommendations to increase inter-actor collaboration and ensure the sustainability of the sports program in East Java Ansel & Gash, 2008.²¹

DISCUSSION

Collaborative Governance in the Implementation of Regional Sports Design as a Sports Governance Approach in East Java

The implementation of Regional Sports Design in East Java represents a fundamental transformation in the sports governance paradigm, which shifts from a conventional approach to a collaborative governance model that involves various cross-sector actors. Based on the theoretical framework of Ansel & Gash (2008) cited in,²² the implementation analysis of Regional Sports Design is carried out through four interrelated dimensions and strengthen: first, the structural-institutional dimension that includes policy design, the formation of a coordination team, as well as the development of norms, standards, procedures, and criteria needed to support effective sports governance; second, the procedural dimension that examines the coordination mechanism between related actors, multi-stakeholder forums, and decision-making processes in regional sports management; third, the relational dimension that focuses on building trust, mutual commitment, and the formation of strategic coalitions between the actors involved; and fourth, the output-outcome dimension that achieves the assessment Policies and their impact on the regional sports ecosystem, including its contribution to sports achievements and equitable distribution of facilities in East Java. These four dimensions are operationalized to understand the complexity of the collaboration dynamics between local governments, KONI, sports branch organizations, the private sector, universities, communities, and the community in realizing sustainable sports governance in East Java.

²¹ Voets, J., Brandsen, T., Koliba, C., & Verschuere, B. (2021). Collaborative Governance. In *Oxford Research Encyclopedia of Politics*. Oxford University Press.
<https://doi.org/10.1093/acrefore/9780190228637.013.1419>

²² Ibid

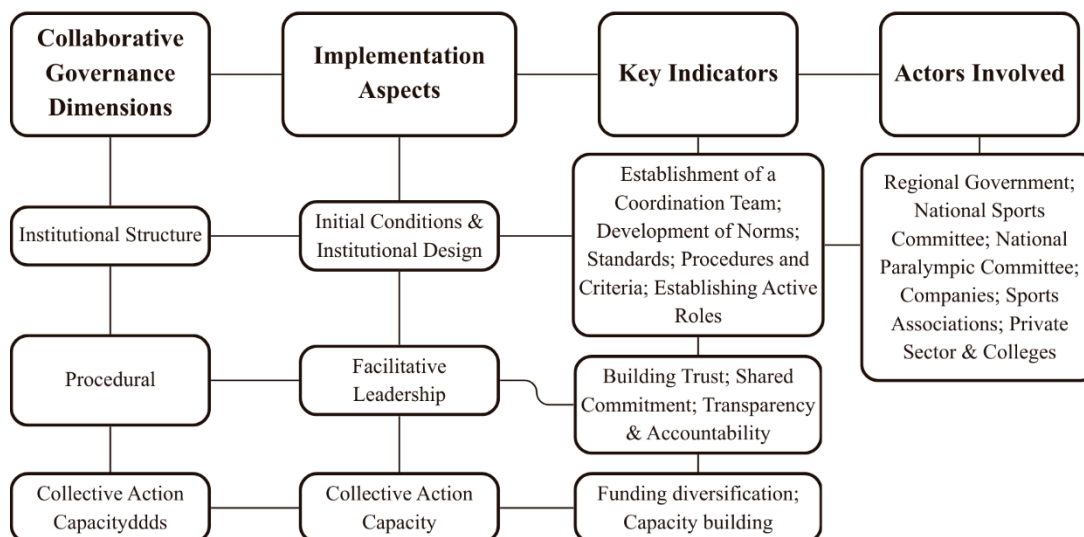


Figure 1. Operationalization of Collaborative Governance Dimension In the Implementation of Sports Design in East Java Region

Source: Researcher, 2025

Figure 1 explains the operationalization of the collaborative Governance Dimension in the Implementation of Regional Sports Design in East Java which reflects an important transformation in the sports governance paradigm, switching from a conventional approach to a collaborative governance model that involves various cross-sector actors in decision-making and policy implementation. This model strengthens the government system and sports coaching more effectively, especially through collaboration between local governments, the Indonesian National Sports Committee, the Indonesian National Paralympic Committee, the private sector, the community, universities and sports. Each actor shares roles and responsibilities to optimize resources and achieve common goals, such as the equalization of sports facilities and the improvement of athletes' achievements at the regional level.

Analysis of the implementation of Regional Sports Design, four main dimensions are applied: structural-institutional, procedural, relational, and output-outcome. The structural-institutional dimension includes policy design, the formation of coordination teams, as well as the development of norms, standards, procedures, and criteria that support effective sports governance. The procedural dimension examines the coordination mechanism between related actors, multi-stakeholder forums, and decision-making processes in regional sports management. The relational dimension focuses on building trust, mutual commitment, and the formation of a strategic coalition between various parties involved in collaboration. The output-outcome dimension examines the policy achievement and its impact on the regional sports ecosystem, including the equal distribution of facilities and the improvement of athlete achievement. Facilitative leadership plays a key role in maintaining the course of effective collaboration. Leaders in this collaboration are tasked with facilitating dialogue between the actors involved, ensuring that all parties have the opportunity to contribute, and maintaining the sustainability of the program. The local government acts as a facilitator who coordinates various parties, ensuring transparency and accountability in every decision taken.

Capacity for joint action, which refers to the collective ability of actors to act effectively, is also an important element in the success of Regional Sports Design. Capacity building allows each actor to optimize their ability in implementing mutually agreed programs. Funding diversification is also an important factor that supports the smooth implementation of sports programs, where the private sector acts as a funding partner through corporate social responsibility and sponsors. This collaborative governance model is very relevant in the context of Regional Sports Design in East Java, because it can create significant changes in the distribution of sports facilities and improve the achievement of athletes, especially in areas with limited resources and low coaching capacity. Each actor in the implementation of Regional Sports Design has a specific role that supports each other. The local government acts as a facilitator and regulator that coordinates policies, budget allocations, and the preparation of regulations that support sports programs.

The Indonesian National Sports Committee is responsible as the technical coordinator of achievement coaching and athlete selection, while the sports branch organization plays a role in the coaching of athletes and organizing competitions. Universities support through research and sports science for human resource development, while the private sector plays a role in funding and developing the sports economy. The sports community plays an important role in mobilizing community participation through grassroots events and policy advocacy. The Indonesian National Paralympic Committee has a special role in the development of disabled athletes, ensuring that they receive the necessary training and support to achieve maximum achievements at the national and international levels.

Overall, the implementation of Regional Sports Design in East Java involves various actors who play an important role in managing sports sustainably and inclusively. Each actor has a complementary responsibility and ensures the success of the program implementation, with a focus on transparency, joint commitment, and capacity building. This diversity of roles ensures the achievement of common goals in sustainable and equitable sports management in East Java.

Sustainable Sports Governance in East Java

Sustainable sports governance is a concept that goes beyond the achievement of short-term achievements and emphasizes the development of a holistic, inclusive, and sustainable sports ecosystem. Sustainable governance is operationalized through four main fields, namely community sports, educational sports, achievement sports, and disability sports that are interrelated and reinforce each other. These four realms form a comprehensive sports development pyramid, where a strong foundation in community sports and education will support the achievement of sustainable achievements.

**Table 1. Strategy for the Implementation of Four Sports Domains
in East Java Regional Sports Design**

Sports Domain	Priority Program	Purpose and Focus	Output
Community Sports	Community Sports Drive Program	Increased active participation & mass fitness	- Increase community sports participation up to 50%
			- Decreased obesity rate & increased physical activity

Sports Domain	Priority Program	Purpose and Focus	Output
Educational Sports	East Java Program is Happy to Move	Improve the overall health of the community	- Increased community sports participation through social activities such as joint gymnastics, running, and healthy walking
	Sports introduction program in schools	The planting of physical literacy from an early age	- Children's participation in school sports increased to 70% - Increased physical literacy of children
	Socialization of Traditional Sports in School	Integrating traditional sports in the educational curriculum	- Increased knowledge of children about Indonesian traditional sports culture and basic motor skills
Sports Achievement	Student Sports Development Center	Sustainable tiered development of Regional Superior Sports Branches with the Application of Sport Science	- Increase in the number of athletes at the national & international level - The discovery of high potential athletes in the region
	National Talented Sports Development Center	Talent development of athletes for international competitions through Deconcentration funds	- Athlete performance increases in SEA Games/Asian Games - The formation of systematic training for outstanding athletes
	Sports Special Class	Providing a special curriculum for athletes	- Improving the quality of athletes in various sports to reach national and international levels
	Special Sports School	Providing special sports education for young athletes	- Improving sports achievements at the student level and at other competition levels
	Talent Scouting	Detecting talented athletes from a young age the application of Long Term Athlete Development	- An increase in the number of outstanding athletes prepared for international competitions
Disability Sports	Special Student Sports Training Center	Sustainable tiered development of Regional Superior Sports Branches with the Application of Sport Science	- Increasing the number of outstanding disabled athletes at the level of Peparnas, ASEAN Paragames, Asian Paragames, Paralympic

Sports Domain	Priority Program	Purpose and Focus	Output
	Disability Sports Special Class	Providing a special curriculum for disabled athletes	- Improving special facilities for disabled athletes in schools
	Special School for Disabled Sports	Providing a special school for disabled athletes	- Improving the Provision of School Infrastructure for disabled athletes
	Talent Scouting Breaks the Boundaries	Finding the potential of early childhood disabled athletes based on disability classification Application of Long Term Athlete Development	- Increasing seeds of Disabled Athletes to be nurtured towards the National and International Levels

Source: Researcher, 2025

Table 1 illustrates the programs implemented in East Java in various sports fields, such as community sports, education, achievement, and disability, which are closely related to the implementation of sustainable sports governance. Sustainable sports governance involves a transparent, participatory, and inclusive approach, involving various actors from the public, private, and community sectors. In this context, every program that has been mentioned plays an important role in ensuring the sustainability of sports management at the regional level. The East Java Seneng Gerak Community Sports Program focuses on improving mass fitness and active community participation through social activities involving the community. This program not only aims to increase people's exercise participation up to 50%, but also to reduce obesity rates and increase physical activity, which contributes to a sustainable healthy lifestyle.

In the field of Educational Sports, the Introduction of Sports in Schools and the Socialization of Traditional Sports in Schools focuses on cultivating physical literacy from an early age, which aims to increase children's participation in sports in schools up to 70%. In addition, this program also supports the integration of traditional sports in the educational curriculum, so that children not only learn modern sports, but also understand the traditional Indonesian sports culture. This is in line with the principle of sustainable sports governance, which sees the importance of strengthening sports education as part of long-term management in forming a healthy and active generation. Programs such as the Student Sports Training Center and the National Talented Athletes Training Center support the development of athletes with a tiered approach and the application of sports science, aiming to increase the number of outstanding athletes at the national and international levels. These programs show the importance of long-term planning in the management of performance sports, which includes talent selection, continuous training, and the development of a sustainable funding system. This ensures that athletes can develop from the basic level to become athletes who are ready to compete at the international level.

In the field of Disability Sports, programs such as the Special Student Sports Development Center and the Disability Special Sports Class emphasize accessibility and inclusion, ensuring that disabled athletes get equal opportunities in sports. These programs provide facilities and training tailored to the needs of disabled athletes, as well as ensuring that they have access to compete at the international level, such as in the Paralympics. This reflects the principle of sustainable governance that encourages accessibility and

inclusiveness in sports management. Overall, the implementation of sustainable sports governance in East Java is realized through cross-sector collaboration between local governments, the private sector, the community, and the community. With an approach based on collaboration, participation, inclusivity, and sustainable coaching, these sports programs ensure effective management and can provide long-term benefits for the health and well-being of the community, as well as the development of sustainable sports achievements.

Table 2. Theory Analysis and Discussion on Regional Sports Design in East Java

Aspects in Collaborative Governance	Theory (Ansell & Gash, 2008)	Discussion on Regional Sports Design in East Java
1. Starting Conditions	The forum was initiated by public institutions, with the urgency to involve various actors	Regional Sports Design begins with mapping the inequality of sports facilities and coaching capacity in various regions, creating urgency to involve actors in sports policy
2. Institutional Design	The formation of a structure involving local governments and non-state actors (private sector, community, universities)	The formation of a coordination team involving the local government, the Indonesian National Sports Committee, the Indonesian National Paralympic Committee, sports branch organizations, the private sector, the community and universities, playing a role in the preparation of policies and regulations
3. Leadership	Facilitating leadership, with the role of the local government as the director of collaboration	The local government acts as a facilitator who leads the collaborative forum, ensuring transparency, accountability, and inclusivity in decision making
4. Collaborative Process	Collaboration between actors in decision making, with consensus-based decisions	Multi-stakeholder forums run effectively with coordination mechanisms that ensure that decisions taken reflect the interests of various parties and focus on common goals.
5. Outcomes	Collaboration goals to produce transparent, coordinated, and sustainable public policies	The goal of Regional Sports Design is achieved with a more even distribution of sports facilities, athlete coaching, and data-based policies and the participation of various parties

Source: Researcher, 2025

Table 2 explains that based on the research results, Regional Sports Design in East Java implements the principles of Collaborative Governance described by Ansell & Gash (2008) on to create a more inclusive,

transparent, and sustainable sports management.²³ The process begins with Starting Conditions, where the forum is initiated by public institutions with urgency to involve various actors in formulating sports policies. This starts with mapping the inequality of sports facilities and coaching capacity in various regions, which creates the need to involve various parties in finding solutions to these challenges. In terms of Institutional Design, Regional Sports Design in East Java formed a collaborative structure involving various actors, including the local government, the Indonesian National Sports Committee, the Indonesian National Paralympic Committee, sports branch organizations, the private sector, the community, and universities. The formation of this coordination team allows the preparation of policies and regulations that support the development of sports sustainably.

Leadership in Regional Sports Design also plays an important role, with the local government functioning as a facilitator that directs collaboration between various actors. Local governments ensure that the decision-making process is carried out with transparency, accountability, and inclusivity, maintaining the continuity and involvement of all parties in every decision-making step. Collaborative Process is implemented by prioritizing collaboration between actors in consensus-based decision making. The multi-stakeholder forum formed ensures that the decisions taken reflect the common interest and focus on the goal of improving the quality of sports in East Java.

Finally, Outcomes from the implementation of the Collaborative Governance principle are achieved through more transparent, coordinated, and sustainable policies. Regional Sports Design in East Java resulted in a more even distribution of sports facilities, an increase in athlete coaching, and data-based policies and the participation of various parties. All of this contributes to the achievement of common goals in improving the quality and sustainability of sports in the region, with a long-term impact that can be felt by the community and athletes, both at the national and international levels.

Application of Sport Science in Sports Development in East Java

The application of sport science in sports development has a very important role in improving the quality of athletes, both at the community level and achievements. By integrating scientific and technological approaches, sport science contributes greatly in identifying talents, improving performance, and preventing injuries. One of the main applications is through training optimization and talent identification. Technologies such as wearable devices and biomechanical analysis are used to assess various physical aspects of athletes, such as strength, endurance, and flexibility. Based on this data, the exercise program can be arranged in a more measurable and effective way, allowing athletes to reach their maximum potential without the risk of injury. Talent scouting or talent search also plays an important role in this process, by using sports science techniques to assess the potential of athletes in various sports. This approach helps in identifying talent from an early age, ensuring athletes with the best potential can be found and given the opportunity to develop further. Teaching various sports from an early age proved to be more effective in

²³ Voets, J., Brandsen, T., Koliba, C., & Verschuere, B. (2021). Collaborative Governance. In *Oxford Research Encyclopedia of Politics*. Oxford University Press.
<https://doi.org/10.1093/acrefore/9780190228637.013.1419>

developing physical literacy compared to introducing specialization too early.²⁴ Lastly, collaboration with universities and research development in the field of sports science further strengthens the quality of athlete coaching. Through this collaboration, more effective and scientific evidence-based training techniques can be applied, ensuring that the coaching program in East Java is more innovative and ready to compete at the national and international levels (Darmadi et al., 2020).

Table 3. Sport Science in the Athlete Training Cycle

Development Stage	Sport Science Application	Type of Data Collected	Technology/Tools	Output/Benefit
Talent Scouting	Physical test, Psychological test	Physical data, basic performance data, psychological profile	Stadiometer, caliper, Cooper test, psychometric software	Identify the potential of athletes based on evidence
Nursery & Training	Exercise periodization, Exercise monitoring	Exercise volume & intensity, Recovery index, Nutritional intake	Wearable sensors, GPS tracking, food diary application	Measured individual exercise program, minimal injury
Monitoring & Competition	Performance analysis, Match strategy	Technical data, Opponent tactics, Stress level, Muscle fatigue	Perangkat lunak analisis video, biofeedback, cryotherapy	Optimal performance during competition, data-based strategy
Continuous Monitoring & Evaluation	Tracking long-term progress, Talent development pathway	Integrated athlete database, Injury history, Performance trends	Big data analytics, cloud database, dashboard M&E	Linear training, systematic athlete regeneration

Source: Researcher, 2025

Table 3 illustrates the stages of athlete coaching that involve the application of sport science to optimize the athlete's performance starting from the talent search stage to continuous evaluation. In the talent scouting stage, physical and psychological tests are used to collect physical data, basic performance, and psychological profiles of athletes. Technologies such as stadiometers, calipers, Cooper tests, and psychometric software are used to identify potential athletes based on evidence, aiming to find the best talent that can develop further. Furthermore, at the nursery and exercise stage, coaching is carried out through exercise periodization and exercise load monitoring, which includes volume, intensity, recovery index, and nutritional intake. Technology such as wearable sensors, GPS tracking, and food diary applications are used to monitor exercise and nutrition data, ensuring measurable exercise programs and reducing the risk of injury. At the stage of stability and competition, the main focus is performance analysis and match strategy. Technical data, opponent's tactics, stress levels, and muscle fatigue are collected to ensure optimal athlete performance during competition. By using video analysis software, biofeedback, and

²⁴ Perreault, M., & Gonzalez, S. (2021). Generalize Over Specialize: Examining the Long-Term Athlete Development Model to Optimize Youth Athlete Development. *Strategies*, 34, 11–15. <https://doi.org/10.1080/08924562.2021.1896914>

cryotherapy, data-based strategies can be applied to improve performance in the competition. Lastly, in the monitoring and continuous evaluation stage, the long-term progress of athletes is monitored through tracking the athlete's development and career path (talent development pathway). The collected data includes an integrated athlete database, injury history, and performance trends at all times, which are processed using big data analytics, cloud database, and M&E dashboard. This ensures linear coaching, systematic athlete regeneration, and can be monitored in detail for long-term development. With the implementation of sport science in each stage of coaching, the coaching process becomes more measurable, efficient, and data-based, which allows athletes to achieve their best performance from the initial stage to high-level competition

CONCLUSIONS

The implementation of the Regional Sports Design in East Java reflects a shift in sports governance toward a collaborative governance model that emphasizes cross-sectoral and multi-actor involvement in both policy formulation and implementation. The effectiveness of this implementation is determined by the interrelation of four main dimensions, namely the structural–institutional dimension that establishes legitimacy through institutional design, the procedural and relational dimensions developed through facilitative leadership to foster trust and mutual understanding, and the output–outcome dimension related to the capacity for collective action through the strengthening of norms, standards, procedures, criteria, and funding diversification. This collaborative governance approach is capable of addressing disparities in sports facilities and infrastructure across regions, variations in coaching capacity, and low levels of community participation through transparent, accountable, and evidence-based coordination mechanisms aimed at creating an inclusive and sustainable sports ecosystem in East Java. Strengthening the implementation of the Regional Sports Design requires enhancing the capacity of cross-sector coordination teams to improve policy formulation and implementation management, accelerating the equitable distribution of sports facilities through innovative financing schemes such as public–private partnerships, developing digital-based sports management information systems to improve transparency and monitoring, integrating sport science into athlete development to enhance the quality and measurability of coaching, and diversifying funding sources from public, private, and community sectors to ensure the sustainability of inclusive sports programs. Through these measures, the implementation of the Regional Sports Design in East Java is expected to become more robust, sustainable, and capable of generating positive impacts on sports development and overall athletic performance in the region.

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