

Original article

Articulation of the food sovereignty plan with development strategies

Articulación del plan de soberanía alimentaria con las estrategias de desarrollo

Articulação do plano de soberania alimentar com estratégias de desenvolvimento



Carlos Cesar Torres Paez¹  0000-0001-7956-5079  carlosc@upr.edu.cu

Maricela María González Pérez¹  0000-0003-2617-5370  maricela@upr.edu.cu

Jorge Freddy Ramírez Pérez¹  0000-0001-7891-2016  freddy@upr.edu.cu

Luis Gustavo Marín Cuba¹  0000-0002-2476-0026  marin@upr.edu.cu

¹ University of Pinar del Río "Hermanos Saíz Montes de Oca". Pinar del Río, Cuba.

Received: 26/01/2022

Accepted: 6/04/2022

ABSTRACT

With the approval of the National Plan for Food Sovereignty and Nutrition Education in 2020, as well as the Policy to Promote Territorial Development, together with other new regulations, the Municipal Development Strategies and the Provincial Development Strategy, which had been intensively worked on until 2019, an updating process was required. It was necessary to reformulate them under the new conditions, particularly the strategic line of food sovereignty, identifying as a problem the lack of a working system that would articulate both policies from the government, prioritizing the development strategies as the main management tool at each level. Hence, the objective of this contribution is to show the work system under the leadership of the maximum government direction in the province of Pinar del Río. In order to fulfill this objective, participatory action research and group work were used as techniques, corresponding to the qualitative research approach. As a result, a work system was elaborated, structured in premises, principles, objectives, functions, actors,

schedule and a training system for both the provincial and municipal levels, which implementation has already shown positive impacts, both economically, socially and environmentally.

Keywords: food sovereignty and nutrition education; local development; local development strategies; articulation of food sovereignty and local development strategies.

RESUMEN

Al aprobarse el Plan Nacional de Soberanía Alimentaria y la Educación Nutricional en el año 2020, así como la Política para Impulsar el Desarrollo Territorial, unido a otras nuevas normativas, las Estrategias de Desarrollo Municipal y la Estrategia de Desarrollo Provincial, en cuya elaboración se había trabajado intensamente hasta el año 2019, se requería de un proceso de actualización. Era necesario reformularlas bajo las nuevas condiciones, dentro de ellas de manera particular la línea estratégica de soberanía alimentaria, identificándose como problema la carencia de un sistema de trabajo, que desde el gobierno articulara ambas políticas, jerarquizando las estrategias de desarrollo como la herramienta de dirección principal a cada nivel. De aquí que el objetivo de esta contribución sea mostrar el sistema de trabajo bajo el liderazgo de la máxima dirección del gobierno en la provincia de Pinar del Río. Para cumplir dicho objetivo se emplearon como técnicas, la investigación acción participativa y los trabajos en grupo, correspondientes al enfoque de investigación cualitativa. Como resultado se elaboró un sistema de trabajo estructurado en premisas, principios, objetivos, funciones, actores, cronograma y un sistema de capacitación tanto para el nivel provincial como para el nivel municipal, cuya implementación mostró ya impactos positivos, tanto en lo económico como en lo social y ambiental.

Palabras clave: soberanía alimentaria y educación nutricional; desarrollo local; estrategias de desarrollo local; articulación soberanía alimentaria y estrategias de desarrollo local.

RESUMO

Com a aprovação do Plano Nacional de Soberania Alimentar e Educação Alimentar em 2020, assim como da Política de Promoção do Desenvolvimento Territorial, juntamente com outras novas regulamentações, as Estratégias Municipais de Desenvolvimento e a Estratégia de Desenvolvimento Provincial, que haviam sido trabalhadas intensamente até 2019, foi necessário um processo de

atualização. Foi necessário reformulá-las sob as novas condições, particularmente a linha estratégica da soberania alimentar, identificando como problema a falta de um sistema de trabalho que articulasse ambas as políticas do governo, priorizando as estratégias de desenvolvimento como a principal ferramenta de gestão em cada nível. Portanto, o objetivo desta contribuição é mostrar o sistema de trabalho sob a liderança do mais alto nível governamental da província de Pinar del Río. Para atingir este objetivo, foram utilizadas como técnicas a pesquisa participativa de ação e o trabalho em grupo, correspondendo à abordagem da pesquisa qualitativa. Como resultado, foi elaborado um sistema de trabalho, estruturado em premissas, princípios, objetivos, funções, atores, cronograma e um sistema de treinamento tanto para o nível provincial quanto municipal, cuja implementação já demonstrou impactos positivos, tanto econômicos, sociais e ambientais.

Palavras-chave: soberania alimentar e educação nutricional; desenvolvimento local; estratégias de desenvolvimento local; articulação de soberania alimentar e estratégias de desenvolvimento local.

INTRODUCTION

There are precedents that show that the interactive dialogue between scientists, universities and the government can leave very important results. Fidel's performance as founder and promoter of the revolutionary national science left very good experiences in this regard. The experience of the confrontation with COVID-19 (Díaz-Canel Bermúdez & Núñez Jover, 2020; Martínez Díaz *et al.*, 2020) corroborates the relevance of this dialogue.

The articulated management between the government, universities, scientists, experts and technicians, as well as the people in general, in confronting COVID-19 led the Cuban government to address, with a similar management style, another problem of greater importance and complexity: the food issue (Díaz-Canel Bermúdez *et al.*, 2020), which resulted in the approval in July 2020 of the National Plan for Food Sovereignty and Nutritional Education (SAN in Spanish).

In Cuba, food and nutritional security is one of the priorities in the updating of the economic and social development model. This was made clear in Article 77 of the Constitution of the Republic of Cuba, approved in 2019, when it is stated that all people have the right to healthy and adequate food. The State creates the conditions to strengthen food security for the entire population. On the other hand, in the Economic-Social Strategy for boosting the economy and confronting the global

crisis caused by COVID-19, it is recognized that national food production is a central aspect for the country.

Simultaneously, on the same date, the Policy to Promote Territorial Development (PIDT in Spanish) was approved, which states that the Municipal Development Strategy (EDM in Spanish) until the year 2030 is the integrating instrument available to the governments at that level, for the fulfillment of the constitutionally established municipal purposes in terms of promoting sustainable, inclusive and equitable local development, which its population needs and wants to achieve in line with the economic and social development strategy (Council of Ministers of the Republic of Cuba, 2021; MEP, 2020).

The policy to promote territorial development and Cuba's Food Sovereignty and Nutritional Education Plan are oriented to the development of the economy and place special emphasis on local perspectives; they are two instruments, above all, for work at the grassroots and fundamentally in the municipalities. The applications of these tools are closely interrelated, they lead to a common point of attention: the role of the municipality in the advancement of the nation. Life is showing that this is the main structure that must be strengthened, which must be oriented to implement what has been proposed and have results (Díaz-Canel Bermúdez, 2020c).

Within the framework of local development strategies, and based on its situation, each municipality must project its development goals on all fronts, for which it elaborates a broad set of programs and projects that respond to the diagnosed public problems.

An analysis conducted by the Local Development Management Center (GEDEL in Spanish) of the strategies designed so far, in the line associated with food, showed that the largest number of programs and projects corresponded to those that contribute to increasing the availability of food, while the rest of the SAN components, strategic themes and cross-cutting components defined in the national plan approved in this regard for the country were treated very discretely.

Hence the question arises: how to achieve the articulation between the SAN plan and development strategies in such a way that all the components included in SAN are comprehensively addressed, while at the same time meeting the population's food needs?

In order to answer this question, the highest government leadership in the province of Pinar del Río summoned the University and particularly the Center for Management, Local Development, Tourism

and Cooperativism Studies (CE-GESTA in Spanish) to, together with other actors, make a proposal that would allow harmonizing both indications under the leadership of the government, aimed at transforming the ways of managing the territory that had been applied, in order to increase the satisfaction of the people's food needs and their quality of life.

Hence, the objective of this article is to show the work system that, under the leadership of the highest governmental direction, together with the Center for the Management of Local Development (GEDEL), the provincial delegation of the Ministry of Agriculture (MINAG in Spanish), the delegation of the Ministry of Science, Technology and Innovation (CITMA in Spanish) and the University of Pinar del Río "Hermanos Saíz Montes de Oca" (UPR in Spanish), particularly the CE-GESTA Study Center, was conceived and has been implemented in the province of Pinar del Río and its municipalities.

MATERIALS AND METHODS

In order to provide a theoretical basis for the proposal, the documentary analysis technique was used, consulting the documents approved by the country in the Congresses of the Communist Party of Cuba (PCC in Spanish) since 2011, with particular emphasis on those approved in the VIII Congress held in 2020, the Constitution of the Republic approved in 2019, the reports of the National workshops on food production with more science and of the meetings of President Miguel Díaz-Canel Bermúdez with scientists working in this branch of science, as well as the policy documents approved in 2020 in the context of the pandemic associated with the subject. Likewise, scientific articles and doctoral theses associated with the subject in the last five years were consulted.

Qualitative research techniques were also used for the development of the work, including participatory action research and group work. The proposal was constructed in a participatory and collegial manner in the executive working group and was subsequently submitted to the consideration and final approval of the coordinating group created for this purpose.

RESULTS AND DISCUSSION

Theoretical foundation of the work system

The application in the municipalities and provinces of any initiative, indication, policy or legal norm approved at the national level by the National Assembly of the People, the Council of State and Ministers, the Organisms of the Central Administration of the State, or the Superior Organizations of

Entrepreneurial Management, requires their territorialization, which implies their harmonious integration in the design and implementation of the programs of the Municipal Development Strategy (EDM) and the Provincial Development Strategy (EDP), as well as in the work system for their execution, follow-up and control, in compliance with the provisions of the territorial policy on decentralization.

Like any management tool, the EDM and EDP, and the governments that manage them, must have the flexibility, wisdom and capacity for change to assimilate and implement these guidelines in a contextualized and original manner, making use of the autonomy granted to them by the Constitution of the Republic and the PIDT, without deviating from the fulfillment of the mission and vision previously defined and approved by their municipal assemblies.

For their part, Ramos Crespo *et al.* (2018) define SAN management as: the decision-making process related to each of its components, under the leadership of the government and through the articulation of all the actors involved, in line with the specificities of the territory, climate changes, availability of resources, institutional capacity and infrastructure, which requires an information system that allows continuous data collection, analysis, interpretation and dissemination of the results, with a real participatory approach, in order to enhance all knowledge in this regard and in terms of ensuring a sustainable SAN.

The authors state that SAN should be considered as a concept that encompasses various dimensions and sectors, since it is made up of several elements, such as: availability, access, stability of supply and biological utilization of food. There is a need for all these components of the concept of SAN to be articulated in a concatenated manner, with the participation of the municipal government being decisive, which, from the definition of policies and strategies, must carry out planning, organization, direction and control actions that affect the different scenarios, in order to adapt to change, moderate potential damage, take advantage of the positive effects or bear the negative consequences, in the global dynamics, on the real possibilities of managing it on a territorial basis, because without food security, other development processes can hardly be considered.

The contextualization of the SAN plan at the local level implies a paradigm shift in agricultural production, generally highly dependent on imported inputs, in order to build a more sustainable one on agroecological bases.

The SAN plan implies a change in the predominantly sectoral and top-down approach with which food production and marketing and food safety had been managed in Cuba to date. Its strategic themes and cross-cutting components, together with its four dimensions, generate the need to reformulate the development programs associated with food production, education, culture, communication and health that had been designed in the process of developing the EDP and the EDM in each territory.

According to the Food and Agriculture Organization of the United Nations in 2009, cited in Economic Commission for Latin America and the Caribbean (CEPAL, 2017), attention to the SAN plan requires a comprehensive, multisectoral and interdisciplinary approach, due to the wide range of factors involved: political, economic, environmental, social, cultural, religious, nutritional (biological), hygienic-sanitary, sensory, aesthetic and gender.

However, the articulation between the EDM, EDP and the SAN-LFS (Local Food System) will not be achieved unless working systems, methodologies and procedures are generated or improved on an innovative basis to facilitate it and to train the different actors.

Making the concept of SAN a reality in each territory, defined as: "The nation's capacity to produce food in a sustainable manner and provide access to the entire population to sufficient, diverse, balanced, nutritious, safe and healthy food, reducing dependence on external means and inputs, with respect for cultural diversity and environmental responsibility" (MINAG, 2020), requires a change in the vision of all the actors involved in this process: Producers, marketers, regulators, suppliers, educators, researchers, consumers, communicators; in short, it requires transforming the ways of doing things to obtain the expected results and that will only be achieved in the medium and long term, based on an integrated work of all, under the leadership of local governments, with emphasis on citizen participation, particularly of youth.

It is agreed with Ramos Crespo and González Pérez (2019) when they define the concept of public management of SAN as the decision-making process by governments, relating to each of the components of SAN separately and as a whole, through the broadest participation and articulation of all the actors involved, including the population, in correspondence with the characteristics and potential of each territory and its development strategy.

In order to manage their LFS, local governments must act in accordance with the rules of an open government: broad citizen participation and control, inter-territorial, generational and gender focus, transparency, co-creation and intensive use of knowledge of all types, but with particular emphasis

on scientific knowledge, given the capacities created in the country, respecting the customs and culture of each territory, so that the results contribute to the fulfillment of the Sustainable Development Goals and the state plan of the Task Life.

The construction of the Local Food System, which materializes the SAN plan in each municipality, requires not only dialogue with national or provincial actors who set prices, define destinations, distribute resources, decide what is planted, how it is planted and when it is planted, often ignoring the socio-cultural environments in which they are developed, but also dialogue with the interests of local governments, the actors responsible for putting them into practice (producers), the actors who regulate, advise, train, ensure and facilitate the comprehensive implementation of the LFS. This is why the governance of LFS is so important and complex.

In order to guarantee success and sustainability, it is necessary to create capacities for informed decision-making, projections, integration of stakeholders, dialogue of knowledge, teamwork, etc., both at the government level and according to the role played by each of the stakeholders involved in the implementation of the LFS; innovations must also be introduced in the way they are managed at the level of each province and municipality, first and foremost in their governments.

To design and implement the LFS, the government should promote the creation of multidisciplinary teams, where all the diversity of actors in the municipality involved directly or indirectly in decisions related to the availability, access, consumption and biological use of food, along the entire production and value chain, are represented, to work on the development and/or improvement of the EDP and EDM development programs until 2030, which together will integrate the LFS, and monitor its implementation.

The implementation of the SAN plan should draw on the large number of scientific results and practical experiences associated with the production, industrialization, marketing and consumption of food produced by the country's universities and scientific centers.

Overall, the PIDT and the SAN plan are two instruments above all for work at the grassroots and fundamentally in the municipalities: "The municipal government is the local actor with the greatest capacity to organize and lead, and for this the integral, stable, proactive and autonomous functioning of the municipality is decisive" (Díaz-Canel Bermúdez, 2020a).

Working system to articulate the SAN plan with the EDM and EDP

In a recent article it was stated: "The confrontation with COVID-19 brings with it some lessons learned that enrich future experiences. It has confirmed the capacity and convenience of achieving close collaboration between scientists and the Government" (Díaz-Canel Bermúdez & Núñez Jover, 2020); "if we have to put all our thinking into something and take it to a different conception from what we have been doing, it is food production" (Díaz-Canel Bermúdez, 2020b).

In June 2020, based on the indications received from the President of the Republic, MINAG and CITMA, to generate in the provinces a working system to address food production with more science, and taking into account the guiding and fundamental principle of achieving the integration of processes and avoiding atomizing the management of municipal governments, it was proposed in Pinar del Río to articulate this task to the strategic management of local development that was being promoted in the territory, where the University has played a leading role.

It was thus decided to devise a working system for SAN based on the governance of the LFS. It is conceptually focused on the process of planning, organization, implementation and evaluation of development programs that contribute to the strategic line of "food sovereignty and nutrition education", defined in the eleven EDM and the EDP, elaborated with a holistic approach (production, transformation, marketing and consumption), interinstitutional and transdisciplinary.

The essential components that structure the work system are the following: objectives, principles, premises, composition and functions of the provincial coordinating group and the municipal coordinating groups; development programs and prioritized topics; provincial working groups by programs and prioritized topics; activities to be developed and work schedule, as well as the methodology for the elaboration of the development programs. These have been defined on the basis of a joint work between the government, the University, the MINAG delegation and the CITMA delegation and validated in a broad composition of stakeholders of the territory.

In this task, once again, the university assumes a leading role by getting involved in its initial conception of CE-GESTA and in the development and implementation of the Agricultural, Social and Economic Sciences teaching programs.

In order to manage the work system, it was decided to form a coordinating group, both at the provincial and municipal levels. The following actors are permanent members of these groups (some

vary depending on whether or not they are present at the municipal level): governor/intendent (general coordinator); vice-governor; coordinators of related programs and objectives; delegates from MINAG (technical coordinator) and CITMA; director of the Provincial Meteorological Center;,, director of the Information and Technological Management Center; rector of the University of Pinar del Río "Hermanos Saíz Montes de Oca" (UPR) or directors of the Municipal University Centers (CUM in Spanish); director of the Territorial Office of Standardization; director of the Provincial Center for the Strategic Management of Local Development; coordinators of the Ministries of Industry and Food Industry (municipal entities); representative of the Cuban Academy of Sciences; deans of the faculties of Social and Humanistic Sciences, Agronomic and Forestry Sciences and Economic and Business Sciences (UPR); director of the CE-GESTA Study Center (UPR); directors of Economy and Planning, Finance and Prices, Physical Planning, Health, Education, Water Resources and Foreign Trade, Foreign Investment and International Cooperation; presidents of the National Association of Small Farmers, Cuban Association of Agricultural and Forestry Technicians, Cuban Association of Animal Production, National Association of Economists and Accountants of Cuba, Association of Animal Health and Association of Communicators; coordinator of the Local Agricultural Innovation Program and of the strategic front of food production of the Scientific and Productive Pole.

Researchers, specialists, academics and producers are invited to the working sessions to check the Food Sovereignty and Nutrition Education Plan with more Science, according to the programs, topics and agreements to be checked.

The food production development programs defined as priorities were the following: rice, grains, viands, vegetables, citrus and fruit, canned fruit and vegetable industry, coffee and cocoa, beekeeping, animal feed, swine, poultry, small livestock, cattle, dairy and meat industry, soil and agricultural engineering, agricultural bioproducts, veterinary medicines, aquaculture and platform fishing.

As part of the work system, the methodology for the preparation of development programs was reformulated, with the following fundamental elements:

- Relationship of the program with the guidelines (PCC, 2021), with the National Economic and Social Development Plan until 2030 and with the Sustainable Development Goals 2030
- Map of productive and/or service actors involved (state and non-state)

- Diagnosis of the program's potentials and constraints (natural resources, material and infrastructure resources, economic-productive resources and human resources)
- Main difficulties or barriers that limit the generation and application of science
- Determination of strengths, weaknesses, threats and opportunities
- Definition of the program's strategic objectives
- Projection of production indicators, both in physical units and in value (specifying production levels depending on the different destinations: national balance, municipal self-sufficiency, animal feed, national industry, local industry, seeds, exports, Mariel Special Development Zone, tourism, business with foreign investment and social consumption)
- Projection of investments in its different components and currencies, as well as constructive maintenance actions (emphasizing technology transfer, modernization of existing technology, technology-based projects, etc.)
- Projection, by year, of the demand for labor force (skilled and unskilled)
- Projection, by year, of the overall balance of energy carriers and water demand
- List of science results that are planned to be introduced to achieve the objectives, indicators and goals defined in the program (specifying whether they are to be validated, scaled or generalized, as well as introducing and receiving entities)
- Technical assistance and agricultural extension system to the available productive base and related needs
- System of actions to be carried out (innovative solutions) and their cost (prioritized), specified for each year to address the weaknesses and barriers identified
- Indicators for the evaluation of the impact of the introduction of science in food sovereignty and nutrition education, which is the responsibility of the specific program
- Need for further research

A group of cross-cutting issues are also analyzed in the working sessions: municipal food self-sufficiency; collection, processing and marketing system for supplying the population; development of local micro and mini-industry; metrology, safety and health for food production; scientific-technical services for food production (including agrometeorology, technological surveillance and agricultural extension up to the production base); nutrition education and communication; efficiency in state and non-state business management; economic incentives and prices in food production; management of agro industrial value chains; socio-cultural studies linked to agro industrial activity; computerization and automation of agro industrial processes. The analysis of these topics is interspersed in the working sessions with the analysis of development programs.

Although the pandemic has prevented greater physical access to the municipalities, the work system is introduced in all the municipalities of the province of Pinar del Río and in the municipality of Isla de la Juventud.

Based on the work system proposed by the provincial group, each municipality has developed its own method and has been working on the development and/or improvement of the 18 prioritized programs associated with SAN, as well as on the system to address the process of implementation and control of the same, particularly oriented to the incorporation in the 2021 annual plan and the development of local development projects, identified in each program for financing with 2021 funds or preparing them for incorporation in the 2022 plan.

A summary of the main activities carried out to design and implement the working system to articulate the SAN and the EDM and EDP is presented below:

- Approval by the Provincial Governing Council of the work system
- Systematic checks on the progress of the implementation of the work system in the Provincial Council of Government
- Training for mayors of all municipalities: two face-to-face seminars and one videoconference
- Seminar to the municipal coordinating groups in all municipalities in person
- Seminar for University professors who advised the work in each of the programs and in the municipalities: two face-to-face seminars and one virtual seminar for CUM professors
- Seminars for EDP development program coordinators: two face-to-face seminars
- Advisory and control visits to the municipalities by a representation of the provincial working group
- Advice to the teams of each program in GEDEL, to clarify doubts and review programs, in a weekly program, according to the demand of each team

Among the indicators that show the impact of the implementation of the work system are: diversification of assortments in the dairy industry, food sales to the Economic Development Zone (ZED in Spanish) Mariel, food exports, use of substitute raw materials for imported products in the production of ice cream and canned meat, more than 10 new productive linkages, start-up of new mini-industries, development of agricultural production centers in all municipalities, planting of fry, construction of livestock modules, 12 local development projects under implementation and 32 others

in different stages of development, introduction of new varieties and technologies, more than 2,000 trained stakeholders, among others.

Government management supported by science and innovation, aimed at facing the great challenges facing the country, seeks to strengthen decision-making at all levels and in all areas, with the support of expert knowledge, while allowing them to find more expeditious ways to advance their proposals.

In the field of SAN, firm steps are being taken in the right direction. It is still a young experience that will mature over time, to the extent that it is implemented as a relevant and strategic component in the public agendas of governments at different scales, as well as in their local public management instruments. The consolidation of LFS, strongly articulated with municipal and provincial development strategies, will also require a wise governmental management that manages to integrate all local actors and the performance of ministries and agencies, whose policies, decisions and work systems can help or limit the deployment of LFS.

The lessons that Pinar del Río is accumulating in terms of territorial implementation of SAN, articulated with the EDM through the LFS, help to identify work approaches and management formulas that can eventually be used by other territories engaged in similar efforts.

REFERENCES

Asamblea Nacional del Poder Popular (2019). *Constitución de la República de Cuba*. Gaceta Oficial de la República de Cuba, Edición Extraordinaria No. 5.

<https://www.gacetaoficial.gob.cu/es/constitucion-de-la-republica-de-cuba-proclamada-el-10-de-abril-de-2019>

CEPAL (2017). *Seguridad alimentaria y nutricional en Centroamérica y la República Dominicana: Explorando los retos con una perspectiva sistémica*. Comisión Económica para América Latina y el Caribe. <https://repositorio.cepal.org/handle/11362/42588>

Consejo de Ministros de la República de Cuba (2021). *Decreto 33 Para la gestión estratégica del desarrollo territorial*. Gaceta Oficial de la República de Cuba, Edición Ordinaria No. 40.

<https://www.gacetaoficial.gob.cu/es/decreto-33-de-2021-de-consejo-de-ministros>

Díaz-Canel Bermúdez, M. (2020a). *Gobierno municipal: Actor local con mayor capacidad para organizar y liderar*. Presidencia y Gobierno de Cuba.

<https://www.presidencia.gob.cu/es/noticias/gobierno-municipal-actor-local-con-mayor-capacidad-para-organizar-y-liderar/>

Díaz-Canel Bermúdez, M. (2020b). *Por un ejercicio de pensamiento que transforme al país*.

Presidencia y Gobierno de Cuba. <https://www.presidencia.gob.cu/es/noticias/por-un-ejercicio-de-pensamiento-que-transforme-al-pais/>

Díaz-Canel Bermúdez, M. (2020c). *Todo lo que hagamos tiene que tener una articulación en el municipio*.

Presidencia de Cuba. <https://www.presidencia.gob.cu/es/noticias/diaz-canel-todo-lo-que-hagamos-tiene-que-tener-una-articulacion-en-el-municipio/>

Díaz-Canel Bermúdez, M. & Núñez Jover, J. (2020). Gestión gubernamental y ciencia cubana en el enfrentamiento a la COVID-19. *Anales de la Academia de Ciencias de Cuba*, 10(2), e881.

<http://www.revistaccuba.cu/index.php/revacc/article/view/881>

Díaz-Canel Bermúdez, M., Núñez Jover, J. & Torres Paez, C. C. (2020). Ciencia e innovación como pilar de la gestión de gobierno: Un camino hacia los sistemas alimentarios locales.

Cooperativismo y Desarrollo, 8(3), 367-387.

<https://coodes.upr.edu.cu/index.php/coodes/article/view/372>

Martínez Díaz, E., Pérez Rodríguez, R., Herrera Martínez, L., Lage Dávila, A. & Castellanos Serra, L.

(2020). La industria biofarmacéutica cubana en el combate contra la pandemia de COVID-19. *Anales de la Academia de Ciencias de Cuba*, 10(2), e906.

<http://www.revistaccuba.cu/index.php/revacc/article/view/906>

MEP (2020). *Política para impulsar el desarrollo territorial*. Ministerio de Economía y Planificación.

<https://www.mep.gob.cu/sites/default/files/Documentos/POLITICA%20PARA%20IMPULSAR%20EL%20DESARROLLO%20TERRITORIAL.pdf>

MINAG (2020). *Plan de soberanía alimentaria y educación nutricional de Cuba*. Ministerio de la Agricultura.

https://www.minag.gob.cu/sites/default/files/noticias/documentos_complementarios.rar

PCC (2021). *Lineamientos de la Política Económica y Social del Partido y la Revolución para el período 2021-2026*. Partido Comunista de Cuba. VIII Congreso.

<https://www.pcc.cu/conceptualizacion-del-modelo-economico-y-social-cubano-de-desarrollo-socialista-y-lineamientos-de>

Ramos Crespo, M. E. & González Pérez, M. M. (2019). Modelo de gestión de la seguridad alimentaria y nutricional desde el gobierno a escala municipal. *Revista Economía y Desarrollo (Impresa)*, 162(3).

<http://www.econdesarrollo.uh.cu/index.php/RED/article/view/777>

Ramos Crespo, M. E., González Pérez, M. M., Torres Rivero, I. M., & Fernández López, R. (2018). Validación de indicadores para la gestión pública de la Seguridad Alimentaria y Nutricional. *Cooperativismo y Desarrollo*, 6(2), 169-178.

<http://coodes.upr.edu.cu/index.php/coodes/article/view/198>

Conflict of interest:

Authors declare not to have any conflict of interest.

Authors' contribution:

All authors reviewed the writing of the manuscript and approve the version finally submitted.



This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License

Copyright (c) Carlos Cesar Torres Paez; Maricela María González Pérez; Jorge Freddy Ramírez Pérez; Luis Gustavo Marín Cuba