# PUBLIC ADMINISTRATION OF ZOOS IN THE SUSTAINABLE DEVELOPMENT GOALS

# Julio E. Crespo, Universidad de Los Lagos, Osorno Tirso Javier Hernández Gracia, Universidad Autónoma del Estado de Hidalgo Gilberto Bermúdez Ruíz, Universidad Anáhuac del Sur Arturo Sánchez Sánchez, Universidad Autónoma de Tlaxcala Cruz García Lirios, Universidad Autónoma de la Ciudad de México

## ABSTRACT

Juan Mansilla Sepúlveda, Universidad Católica de Temuco

In the context of climate change, zoos are an important place to observe the relationship between sustainability and human development. By analyzing risks and vulnerabilities, these recreational centers can educate visitors on the importance of the Sustainable Development Goals (SDGs). The objective of this study was to investigate the perceptions of professionals and social servants working in centers that house endangered species. The study used an exploratory, correlational, and cross-sectional approach with a sample size of 100 participants. The results showed that the public administration of zoos was associated with several SDGs including poverty reduction, gender equality, clean and affordable energy, responsible production and consumption, and life on land. Furthermore, the study recommends the inclusion of Comprehensive Disaster Risk Management (GIRD) in the analysis of risks and vulnerabilities in captive species scenarios.

Keywords: Public Administration, Human Development, Sustainable Development Goals, Zoos

### **INTRODUCTION**

The history of public administration is an account of how societies have organized and managed their public affairs over time. The main milestones in the history of public administration:

Antiquity: In ancient civilizations, such as the Egyptian, Mesopotamian, Greek, and Roman, administrative structures were established to manage matters such as tax collection, construction of public works, and maintenance of order. Imperial governments, such as the Roman Empire, developed bureaucracies to manage vast territories.

Middle Ages: During the Middle Ages, public administration was strongly influenced by the Church and the feudal system . The administration focused on maintaining social order and collecting taxes.

Renaissance and Industrial Revolution: The Renaissance brought with it a revival of rational and humanistic thought, which also influenced administration. With the Industrial Revolution, new administrative needs arose due to urbanization and industrialization.

1528-2686-30-1-105

1

19th century: With the consolidation of nation-states and the rise of government bureaucracy, theories of public administration emerged. Frederick Taylor developed "scientific management," focusing on efficiency in production. Woodrow Wilson advocated a merit-based, professionalized civil service.

20th century: Various theories of public administration emerged, including Max Weber's theory of bureaucracy, which emphasizes formalization and hierarchy. During this century, there was an increase in government regulation and the growth of public services.

New Public Management: Beginning in the 1980s and 1990s, the "New Public Management" (NGP) emerged, which sought to apply private sector principles to public administration. This included decentralization, performance measurement, and the introduction of competition in some government sectors.

21st century: Public administration in the 21st century faces challenges such as globalization, information technology, and the need for greater transparency and accountability. The approaches of electronic governance, citizen participation, and management of knowledge are gaining importance.

The history of public administration is an evolutionary process in which societies have sought more efficient and effective ways of managing public affairs and responding to changing needs and challenges. Theories and approaches have been changing over time, adapting to the circumstances and demands of each era.

The Sustainable Development Goals (SDGs) are a series of global targets set by the United Nations to address a variety of global challenges, including poverty, hunger, gender equality, education, health, environmental sustainability, and more. The SDGs were adopted in September 2015 as part of the 2030 Agenda for Sustainable Development, and their history goes back several decades:

1972 - Stockholm Conference on the Human Environment: It was one of the first international conferences on the environment, and laid the foundation for global concern for environmental problems. Although it did not result in the creation of the SDGs, it was an important precursor.

1987 - Brundtland Report: The World Commission on Environment and Development published the report "Our Common Future", also known as the Brundtland Report. This report popularized the term "sustainable development" and called for action to balance economic growth with environmental conservation and social equity.

2000 - Millennium Development Goals (MDG): Established at the United Nations Millennium Summit, the MDGs are eight specific goals aimed primarily at reducing poverty and improving health and education by 2015. Although progress was made on some objectives, shortcomings, and limitations were also recognized.

2012 - Rio+20 Conference: At this conference, the need for a more comprehensive and balanced approach to address global challenges was recognized. It was agreed to develop the Sustainable Development Goals (SDGs) as a continuation of the MDGs.

2015 - Adoption of the 2030 Agenda and the SDGs: In September 2015, world leaders adopted the 2030 Agenda for Sustainable Development at the United Nations Summit on Sustainable Development. This agenda includes 17 SDGs with a total of 169 specific goals. The SDGs address a wide range of issues, from poverty eradication to climate action and gender equality.

Since their adoption in 2015, the SDGs have gained wide acceptance at the international level and have served as a guiding framework for the policies and actions of governments,

1528-2686-30-1-105

2

international organizations, the private sector, and civil society around the world, to achieve sustainable development in all its dimensions.

The history of zoos is long and has evolved over the centuries. Zoos, also known as zoological parks or zoological gardens, are facilities designed to house and exhibit a variety of animals, both for entertainment and education.

Ancient background: The ancient Egyptians and Romans kept collections of exotic animals for the entertainment of royalty and the aristocracy. These animals were exhibited in cages and improvised enclosures.

Middle Ages and Renaissance: During the Middle Ages, some European monarchs began to maintain private collections of exotic animals. However, these animals were often mistreated due to a lack of understanding of their needs and care.

18th century: As scientific knowledge increased, "beast gardens" arose, places where animals were kept with more attention to their natural needs and studied for scientific purposes. The Garden of Plants in Paris is one of the earliest examples of this type of installation.

19th century: Modern zoos began to emerge in the 19th century with a focus on education and conservation. The London Zoo, founded in 1828, is considered one of the first truly scientific and educational zoos. More zoos sprang up around the world, including the San Diego Zoo in 1916, which was noted for its focus on conservation and research.

20th century: During the 20th century, zoos continued to evolve. They focused on providing more natural environments for the animals, mimicking their natural habitats as much as possible. In addition, there was a growing emphasis on conserving endangered species and educating the public about the importance of biodiversity.

21st century: Modern zoos are increasingly oriented towards conservation, research, and education. Many participate in captive breeding programs for threatened species and work on reintroduction projects into the wild. They have also focused on environmental education and public awareness of the conservation of wildlife and ecosystems.

However, the history of zoos has also been the subject of controversy. There has been criticism regarding animal welfare, the ethics of keeping animals in captivity, and the need to provide environments more suitable for their health and well-being. In response to these concerns, many zoos have adopted more ethical and conservation-focused practices in recent decades.

Public administration plays a fundamental role in the implementation of the Sustainable Development Goals (SDGs). The SDGs are a set of global goals established by the United Nations to address a variety of social, economic, and environmental challenges, to achieve sustainable development throughout the world. The public administration has a key role in the planning, coordination, and execution of policies and programs to achieve these objectives. The following details how public administration is related to the SDGs:

Planning and Public Policies: The public administration is responsible for policy formulation and strategic planning to address the SDGs at the national and local levels. This involves identifying priorities, allocating resources, and designing strategies to achieve goals in areas such as poverty eradication, gender equality, quality education, and climate action.

Coordination and Collaboration: The SDGs require the collaboration of various actors, such as governments, non-governmental organizations, the private sector, and civil society. The public administration must coordinate and facilitate these alliances to guarantee effective joint action in the implementation of sustainable projects and programs.

Resource Management: The public administration is responsible for the efficient allocation of financial, human, and technological resources to achieve the SDGs. This involves making informed decisions about how to invest in key sectors such as health, education, sustainable energy, and infrastructure.

Monitoring and Evaluation: The public administration should establish monitoring and evaluation systems to measure progress toward the SDGs. This involves collecting relevant data, analyzing indicators, and measuring the impact of implemented policies and programs.

Transparency and Accountability: The public administration must ensure that efforts to achieve the SDGs are transparent and subject to accountability. This implies effectively communicating the progress, challenges, and results to society and other stakeholders.

Innovation and Adaptation: The public administration must be open to innovation and constant adaptation to face the changing challenges in the implementation of the SDGs. This can include the adoption of new technologies, participatory approaches, and creative solutions to complex problems.

Public administration plays an essential role in transforming the SDGs into concrete actions and tangible results. Their ability to design effective policies, coordinate efforts, appropriately allocate resources, and ensure transparency and accountability is crucial to achieving sustainable development in line with the goals set out in the 2030 Agenda (Anaya, 2014).

The Sustainable Development Goals (SDGs) have implications in several areas, and zoos can contribute to a number of these goals in different ways. Zoos can be related to the SDGs:

Education and Awareness (SDG 4 and 15): Zoos can play an important role in educating society about biodiversity, conservation, and the importance of ecosystems. They provide opportunities for people to connect with wildlife up close, which can inspire greater interest in and commitment to protecting nature (Carreon et al, 2014).

Wildlife Conservation (SDG 15): Zoos are often involved in the captive breeding of endangered species and conservation programs. By breeding and caring for endangered animals, zoos contribute to the preservation of biodiversity and may eventually reintroduce individuals to the wild (Flores, 2013).

Scientific Research (SDGs 9 and 17): Many zoos carry out scientific research on the biology, behavior, and health of animals. These investigations can provide valuable information for the conservation of species and the understanding of ecosystems.

Climate Change Awareness (SDG 13): Zoos can be effective platforms to educate the public about the effects of climate change on wildlife and ecosystems. They can also demonstrate sustainability practices and promote carbon footprint reduction.

Gender Equality and Diversity (SDGs 5 and 10): Zoos can be inclusive environments that foster gender equality and diversity. They can also promote respect for all forms of life and the importance of harmonious coexistence between species.

Responsible Consumption and Production (SDG 12): Zoos can influence people's behavior by promoting responsible consumption and informed decision-making about products that affect wildlife and ecosystems (Garcia, 2011).

Partnerships for Development (SDG 17): Zoos often collaborate with government, nongovernment, and civil society organizations to achieve conservation and education goals. These alliances are essential to address the broader challenges related to biodiversity and the environment.

1528-2686-30-1-105

Importantly, while zoos can have a positive impact on education and conservation, they have also been the subject of criticism about animal welfare and the ethics of keeping animals in captivity. Many zoos are working to improve the living conditions of animals and adopt more ethical and sustainable practices.

Public administration of zoos refers to the management and operation of zoos by government entities. Public zoos are those that are owned by the government or run by government agencies at the local, regional, or national level. Public zoo management involves several unique responsibilities and challenges. The key areas of focus in the public administration of zoos:

Planning and Policies: The public administration of zoos involves the formulation of policies and strategies for the effective management of zoos. This includes long-term planning, the definition of objectives, and the creation of guidelines for the operation of the zoo in line with the needs of conservation, education, and animal welfare (Gomera, 2013).

Financial Resources: Public zoos must manage their financial resources efficiently to ensure financial sustainability. This involves the allocation of funds for the care and maintenance of animals, infrastructure, education, and research.

Animal Welfare: The public administration of zoos should ensure the welfare of animals in captivity. This includes the provision of suitable habitats, quality veterinary care, and environmental enrichment to promote the natural behavior of animals.

Education and Conservation: Public zoos play an important role in educating and raising public awareness about wildlife conservation and environmental issues. The administration must develop educational programs and interactive activities for the public, schools, and community groups (Gudynas, 2010).

Research and Conservation: Public zoos are often involved in research and conservation programs, including captive breeding of threatened species and scientific research to understand better the biology and behavior of animals.

Safety and Visitors: The public administration of zoos must ensure the safety of both visitors and animals. This implies the implementation of adequate security measures, the design of secure rooms, and the training of personnel.

Community Participation: The management of public zoos should encourage the participation and commitment of the local community. This may include collaboration with schools, community groups, and non-governmental organizations.

Transparency and Accountability: Public zoos must be transparent in their operation and management, as well as accountable to citizens and government authorities for their performance and achievements in terms of conservation, education, and animal welfare.

Ultimately, the public administration of zoos is a balance between the goals of conservation, education, and animal welfare, and the need to operate in a financially and ethically responsible manner (McCombs, 1996). Consideration of best management practices, scientific research, and collaboration with other organizations is important for successful public zoo management.

However, the public administration of zoos within the framework of the SDGs follows a diversified agenda if it is considered that they are global objectives with local incidents. Such a process from the global to the local can be demonstrated from a systematic review of the dimensions that explain the determinant variables of a public administration of zoos (Pérez, 2013). Therefore, the objective of this study was to establish the axes and themes of the research

agenda around the public administration of zoos within the framework of the Sustainable Development Goals (Soto, 2012).

Are there significant differences between the guidelines of public administration and the SDGs in the evaluations of students at a public university in central Mexico?

Hypothesis 1. Given that the public administration conforms to the SDGs, the dimensions that explain the management of zoos will conform to guidelines 4, 5, 9, 10, 12, 13, 15, and 17.

Hypothesis 2. Since the public administration of zoos conforms to the guidelines of the SDGs, the perceptual differences of the students should not be significant.

Hypothesis 3. If the expectations of the students regarding the public administration of zoos are similar, then the SDGs would demonstrate their importance as academic axes around the care of species.

#### MATERIALS AND METHOD

A cross-sectional, exploratory, and correlational study was carried out with a sample of 100 students (M = 21.23 SD = 2.4 age and M = 8'978.00 SD = 1'456.00 monthly income) professional practitioners, and social workers from a public university in central Mexico.

The SDG Public Administration Expectations Inventory was used. It includes six dimensions related to 1) planning and public policies, 2) coordination and collaboration, 3) resource management, 4) monitoring and evaluation, 5) transparency and accountability, and 6) innovation and adaptation. The items that make up the instrument are answered with five response options ranging from 0 = "not at all in agreement" to 5 = "quite likely". The reliability and validity of the instrument reached alpha and omega values between 0.767 and 0.780, as well as factor weights between 0.432 and 0.654.

Students were contacted through their institutional email. The objectives and those responsible for the project were reported. The homogenization of the concepts was established using a focus group and the Delphi technique. The application of the instrument was carried out remotely.

Data was captured in Excel and processed in JASP version 16. Centrality, clustering, and structuring parameters were estimated. The contrast of the hypotheses was established with the proximity of the values to unity, which suggests the prevalence of nodes as moderators of the entry and exit of other nodes.

#### **RESULTS AND DISCUSSION**

The nodes that make up the public administration and the SDGs are distributed according to node 15 corresponding to the life of terrestrial ecosystems. This finding corroborates the theoretical assumption that the public administration of zoos directs its capacities and resources to this SDG as it consolidates as an area of development of local sustainability. In other words, SDG 15 regulates the other nodes related to public administration and the SDGs in the context of the management of species in captivity for research, recreation, and appreciation (see Table 1).

Table 1CENTRALITY MEASURES PER VARIABLE												
Network												
Variable	Betweenness	Closeness	Strength	Expected influence								
SDG1	-0.65	-0.396	-0.696	-1.271								
SDG2	-0.65	-2.029	-1.596	0.12								
SDG3	-0.65	-0.147	-0.47	0.344								
SDG4	-0.65	0.104	0.172	-0.618								
SDG5	0.2	0.272	0.438	-1.203								
SDG6	3.235	0.587	2.506	-1.793								
SDG7	0.2	0.97	0.304	-0.963								
SDG8	-0.528	0.674	0.049	0.395								
SDG9	-0.286	0.156	-0.601	0.454								
SDG10	-0.528	-0.691	-0.948	0.174								
SDG11	0.443	1.383	0.818	0.6								
SDG12	-0.65	-1.663	-0.916	0.413								
SDG13	0.2	0.962	0.255	0.676								
SDG14	-0.407	-0.548	-0.065	-0.05								
SDG15	-0.528	-0.594	-0.785	0.161								
SDG16	1.414	1.633	1.639	2.621								
SDG17	-0.164	-0.673	-0.105	-0.061								

Very different from the centrality of the node that represents SDG 15, is the node that symbolizes SDG 5 related to gender equality. A grouping of the dimensions of public administration concerning the SDGs can be seen in the first Barrat coefficient. Next, the grouping is established according to the node linked to SDG 12 corresponding to responsible production and consumption. In other words, SDGs 5 and 12 suggest that the public administration of zoos is established around gender equality and production with responsible consumption. The two remaining parameters Ws and Zhang indicate that SDG 7 linked to affordable and clean energy, as well as the distinctive node 1 for the end of poverty are the SDGs on which the public administration of zoos is configured. In other words, the diversification of nodes to which the configuration of a structure is attributed is different according to the coefficients that measure them. Unlike the centrality where ODS 15 is the node in charge of regulating the other nodes, the cluster has four different nodes that attract the other nodes (see Table 2).

Table 2CLUSTERING MEASURES PER VARIABLE											
Network											
Variable	Barrat <sup>a</sup>	Onnela	WS <sup>a</sup>	Zhang							
SDG1	0	-0.219	0	-0.479							
SDG10	0	-1.222	0	-1.234							

1528-2686-30-1-105

Citation Information: Crespo, E.J., Gracia, H.J.T, Ruiz, B.G., Sanchez, S.A., Lirios, G.C., Sepulveda, M.A. (2024). Public Administration of Zoos in the Sustainable Development Goals. *Academy of Entrepreneurship Journal, 30*(1), 1-10

7

SDG11	0	1.225	0	-0.758					
SDG12	0	-1.024	0	-0.372					
SDG13	0	0.367	0	0.532					
SDG14	0	-0.014	0	-0.616					
SDG15	0	-0.966	0	-1.307					
SDG16	0	1.841	0	0.838					
SDG17	0	0.037	0	0.15					
SDG2	0	-1.783	0	-0.106					
SDG3	0	-0.532	0	0.376					
SDG4	0	0.217	0	2.507					
SDG5	0	0.175	0	1.568					
SDG6	0	1.725	0	-0.287					
SDG7	0	0.686	0	0.54					
SDG8	0	0.155	0	-0.318					
SDG9	0	-0.665	0	-1.035					
<sup>a</sup> Coefficient could not be standardized because the variance									
is too small.									

The nodes related to security and planning begin and end the learning process of the public administration of zoos within the framework of the SDGs. It can be seen that node 15 regulates the other nodes and nodes 1, 5, 7, and 12 group them together. In other words, the zoo management network is represented as part of the SDGs associated with the end of poverty, gender equality, affordable and clean energy, as well as responsible production and consumption (see Table 3). The values of centrality, grouping, and structuring suggest the non-rejection of the hypotheses. The public administration of zoos is associated with SDGs 1, 5, 7, 12 and 15.

Table 3 WEIGHTS MATRIX																	
Network																	
Vari able	SD G1	SD G2	SD G3	SD G4	SD G5	SD G6	SD G7	SD G8	SD G9	SD G1 0	SD G1 1	SD G1 2	SD G1 3	SD G1 4	SD G1 5	SD G1 6	SD G1 7
SD G1	0	- 1.5 02	- 1.4 92	- 1.6 64	- 1.3 4	- 1.8 6	- 1.4 42	- 1.9 47	- 1.8 64	- 2.0 26	-1.7	- 1.8 13	- 1.7 99	- 1.8 65	- 1.1 9	- 2.0 56	- 1.8 48
SD G2	- 1.5 02	0	- 0.0 31	1.2 57	1.2 1	0.8 48	- 1.9 08	0.9 89	- 0.8 09	- 1.2 64	- 0.4 68	0.3 76	- 0.5 14	- 0.8 93	0.4 37	1.4 9	- 1.6 84
SD G3	- 1.4 92	- 0.0 31	0	- 0.8 82	1.0 83	- 2.8 7	- 0.3 4	2.2 77	- 0.4 11	1.3 88	5.8 87	- 0.6 02	- 2.9 54	3.0 83	2.2 4	- 1.1 39	- 3.6 83
SD G4	- 1.6 64	1.2 57	- 0.8 82	0	- 1.3 66	- 9.9 48	- 2.4 53	- 3.3 49	2.3 81	- 0.2 4	- 2.7 78	- 1.3 27	- 0.4 65	1.3 88	- 1.5 12	6.4 91	- 1.2 22
SD G5	- 1.3 4	1.2 1	1.0 83	- 1.3 66	0	- 13. 965	- 3.8 11	2.0 1	- 2.7 62	- 1.2 92	- 1.6 16	0.3 02	0.3 79	- 5.6 5	- 0.3 73	3.5 81	1.4 45

1528-2686-30-1-105

Citation Information: Crespo, E.J., Gracia, H.J.T, Ruiz, B.G., Sanchez, S.A., Lirios, G.C., Sepulveda, M.A. (2024). Public Administration of Zoos in the Sustainable Development Goals. *Academy of Entrepreneurship Journal, 30*(1), 1-10

8

SD G6	- 1.8 6	0.8 48	- 2.8 7	- 9.9 48	- 13. 965	0	- 7.1 79	- 1.2 06	1.1 35	0.4 59	- 2.0 17	- 1.7 96	- 5.2 53	- 1.0 93	- 0.2 28	13. 746	- 5.5 22
SD G7	- 1.4 42	- 1.9 08	- 0.3 4	- 2.4 53	- 3.8 11	- 7.1 79	0	2.6 44	- 1.9 91	- 3.3 89	2.8 95	1.2 88	- 2.1 74	- 3.1 25	- 2.4 09	2.4 56	- 0.9 38
SD G8	- 1.9 47	0.9 89	2.2 77	- 3.3 49	- 2.0 1	- 1.2 06	2.6 44	0	0.5 84	- 0.1 08	- 3.7 9	3.7 58	3.6 28	1.1 27	0.2 9	4.4 94	- 4.9 2
SD G9	- 1.8 64	- 0.8 09	- 0.4 11	2.3 81	- 2.7 62	1.1 35	- 1.9 91	0.5 84	0	- 0.3 06	4.2 89	4.0 72	- 2.4 3	0.2 74	3.3 46	- 1.4 03	- 0.5 88
SD G10	- 2.0 26	- 1.2 64	1.3 88	- 0.2 4	- 1.2 92	0.4 59	- 3.3 89	- 0.1 08	- 0.3 06	0	1.9 9	2.4 27	- 0.5 6	0.6 65	- 3.6 27	3.6 77	0.7 08
SD G11	- 1.7	- 0.4 68	5.8 87	- 2.7 78	- 1.6 16	2.0 17	2.8 95	- 3.7 9	4.2 89	1.9 9	0	- 1.4 58	5.2 88	- 5.3 54	- 1.3 15	4.1 4	2.1 52
SD G12	- 1.8 13	0.3 76	- 0.6 02	- 1.3 27	0.3 02	- 1.7 96	1.2 88	3.7 58	4.0 72	2.4 27	- 1.4 58	0	0.4 07	0.3 27	- 0.7 46	- 3.1 42	0.7 09
SD G13	- 1.7 99	- 0.5 14	- 2.9 54	- 0.4 65	0.3 79	- 5.2 53	- 2.1 74	3.6 28	- 2.4 3	- 0.5 6	5.2 88	0.4 07	0	2.0 52	3.7 27	5.1 32	3.0 4
SD G14	- 1.8 65	- 0.8 93	3.0 83	1.3 88	- 5.6 5	- 1.0 93	- 3.1 25	1.1 27	0.2 74	0.6 65	- 5.3 54	0.3 27	2.0 52	0	- 2.5 93	1.4 85	4.6 6
SD G15	- 1.1 9	0.4 37	2.2 4	- 1.5 12	- 0.3 73	- 0.2 28	- 2.4 09	0.2 9	3.3 46	- 3.6 27	- 1.3 15	- 0.7 46	3.7 27	- 2.5 93	0	1.8 21	0.4 05
SD G16	- 2.0 56	1.4 9	- 1.1 39	6.4 91	3.5 81	13. 746	2.4 56	4.4 94	- 1.4 03	3.6 77	4.1 4	- 3.1 42	5.1 32	1.4 85	1.8 21	0	1.5 82
SD G17	- 1.8 48	- 1.6 84	- 3.6 83	- 1.2 22	1.4 45	- 5.5 22	- 0.9 38	- 4.9 2	- 0.5 88	0.7 08	2.1 52	0.7 09	3.0 4	4.6 6	0.4 05	1.5 82	0

#### **Conclusion and Recommendation**

The contribution of this work to the state of the art consists in the establishment of a learning neural network in which the surveyed sample associates the dimensions of public administration with the SDGs. In this sense, the results show that SDGs 1, 5, 7, 12, and 15 are binding nodes with the dimensions of public administration related to 1) planning and public policies, 2) coordination and collaboration, 3) resource management, 4) monitoring and evaluation, 5) transparency and accountability, 6) innovation and adaptation. These findings correspond to the theory of public administration within the framework of the SDGs, although the studies do not associate sustainable development with human development or public administration. Therefore, it is necessary to extend the study towards the link between sustainable development and human development. That is, the analysis of the interaction of humans with other species can clarify the barriers or the reasons for humanity to develop sustainable. In addition, the Comprehensive Disaster Risk Management (GIRD) studies warn that both sustainable development and human development are binding if the dangers, threats,

1528-2686-30-1-105

and risks that make individuals, groups, and societies more vulnerable, and resilient are considered, helpless and happy. The GIRD studies also point to the possibility of communicating to reduce and prevent risks, threats, and dangers, although in this paper it is noted that public administration is linked to five SDGs. Such a relationship between SDGs and public administration can be analyzed as risk prevention since the awareness of zoo visitors can indicate preventive risk communication. In this way, the area of opportunity of the study lies in the establishment of a preventive relationship of the public administration of zoos in the face of the challenges of the SDGs.

#### REFERENCES

Anaya, Genaro. (2014). Anthropocentric: a mistaken concept Entretextos, 6 (7): 1-12

- Carreon, Javier. Hernandez, Jorge., Garcia, Cruz., Bustos, Jose., Morales, Maria. and Aguilar, J. (2014). The Psychology of water sustainability. Public policies and consumption patterns. *Aposta*, 63: 1-29.
- Flores, R. (2013). <u>Research of social representations of the environment in Brazil and Mexico</u>. Actualidades Investigativas en Educación, 13(1), 1-20.
- Garcia, C. (2011). <u>Water mediation of participation In Iztapalapa & Pihedraita J</u>. Social management for human development, 521-547.
- Gomera, A., Villamandos, F., & Vaquero, M. (2013). <u>Construcción de indicadores de creencias ambientales a partir</u> <u>de la escala NEP</u>. *Acción psicológica*, *10*(1), 149-160.
- Gudynas, E. (2010). <u>The biocentric path: intrinsic values</u>, Nature rights and ecological justice. *Tabula Rasa*, (13), 45-71.
- McCombs, M., Bryant, J., & Zillman, D. (1996). Influence of news about our images of our world. *The effects of the media. research and theories*, 13-34.
- Pérez, D., & Soler, M. (2013). Agroeconomics and ecofeminism to decolonize and depatriarchalize global power. International Journal of Political Thought, 8(1), 93-103.
- Soto, G. (2012). Sustainable development or environmental ethics. *Articles and Essays of Rural Sociology*, 7(13), 7-19.

**Received:** 24-Oct-2023, Manuscript No. AEJ-23-14258; **Editor assigned:** 28-Oct-2023, PreQC No. AEJ-23-14258 (PQ); **Reviewed:** 10-Nov-2023, QC No. AEJ-23-14258; **Revised:** 15-Nov-2023, Manuscript No. AEJ-23-14258 (R); **Published:** 22-Nov-2023