Environmental Management Program Based On ISO 14001 Standards For The Sustainability Of The Universities Of The Lambayeque Region. Peru

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ABSTRACT: The objective of this study is to develop an Environmental Management Program to promotes the environment sustainability in universities located in the Lambayeque region. In this regard, through research on problem it arises what extent the design of an Environmental Management Program based on ISO 14001 contributes to sustainable development of the universities located in the Lambayeque Region? The hypothesis is that the implementation of an Environmental Management Program based on ISO 14001 will contribute to sustainable development in the universities of the Lambayeque region. This work corresponds to a prospective research with a focus on qualitative study to respond to a problem statement; It aims to establish a comprehensive perspective on reality and integrate in a multidisciplinary research. The preliminary diagnosis and the results were obtained, states that the universities located in the Lambayeque Region does not have a built environmental management system and one that only applies an Environmental Management Program Environmental isolated context. Analysis Management Program proposed to be implemented, will benefit the community in general and the universities included in the Lambayeque Region.

Key words: Environmental management, environmental system, sustainable development, ISO 14001.

1. INTRODUCTION.

The Universities in Peru have been and will continue to be due to deep reflection due to the permanent crisis generated by the wrong policies of the governments of the moment that are unaware of their mission and a foolish leadership by their own authorities of the moment. In the stage of the knowledge and technology society, intelligent organizations are characterized by facing the challenges of society, with innovation and development, the operational flexibility of their organization and mainly the intellectual contribution by their members. In this perspective, educational organizations could achieve their goals, in terms of equality, democracy, equity, individual development, productivity and social well-being, thinking of a better country. In this scenario, the university must be prepared to face the multiple challenges that arise in societies.

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In this sense, it is essential to sensitize its members (something that until now has not been fully done in Peru) to promote equity, tolerance, respect, participation, dialogue, teamwork, coexistence, innovation and creativity to properly manage the resources. [1] In the global context of accelerated change, society has undergone a dynamic of profound changes in the political, economic, social, cultural and environmental aspects, followed by the globalization of markets and communications. At the higher education level, organizations should fulfill three main functions: academic, research and extension (input, production and output). In its input or reception function, the institution is called upon to preserve the knowledge accumulated by the humanity and also to incorporate new information, which is achieved with the increase of updated information through magazines, bulletins, telematics communication, events, congresses, etc. The production function marks the characteristic stamp of higher education in its difference with the other educational levels. This function includes research, the elaboration of computer materials, new information and communication technologies. [2]. Environmental management as I understand it deals with a wide range of issues, including those with political, economic, environmental and social implications. The mere mention that the ISO 14001 standard has been successfully implemented can be used by an organization to assure the parties involved that it has established an Environmental Management System deemed appropriate. It also aims to provide an original version of an environmental management program based on its own environmental management model, because it responds to a real environmental problem and therefore appropriate to the characteristics of the Lambayeque region. [3]. The strategies for the application of an Environmental Management Program of environmental management, will allow to increase the credibility and productivity, with the implementation of new subprograms or projects. As long as the measures proposed in the management of the

strategies are fulfilled and implemented. To specify the indicators that will allow the viability of the model of environmental management, to make control and pursuit of the fulfillment of the objectives, that will allow the implementation of the Program of Environmental Management.

2. MATERIALS Y METHODS

The qualitative analysis of human behavior is not limited to the positivist conception that considers that social facts exert an external and causal influence on man. It also values the importance of how reality is experienced and perceived and its influence on man's ideas, feelings and motivations. These qualitative methods are characterized by being descriptive - inductive, phenomenological, holistic, and systemic. Its design is flexible and considers human actions more important in the context where they are carried out than the facts or causes of the phenomena [6]. The design that will guide the present investigation is a simple causal descriptive design. The statistical population is the 5 private universities, 4 private affiliates and 1 national university; all of them circumscribed in the provinces of Chiclayo and Lambayeque. The Santo Toribio de Mogrovejo University is confessional university; the Technological University of Peru is technical; The rest of the private universities are non-confessional. The research methods that were taken into account are the analytical, inductive, deductive and hypothetical-deductive method. Based on a list of indicators constructed based on the thesis of [3]., A report on the environmental commitment of Universities [3]., Environmental indicators indicated by [4]., Models of environmental management systems executed by USCO [5]., Techniques to investigate [4]., Time to investigate [4]. A survey with closed double option questions was developed. The survey contained 48 indicators, divided into 4 sections. This survey was sent to 10 universities in the Lambayeque Region, almost all of which were personally surveyed.

Results

General hypothesis.

GH: The Environmental Management Programme based on the ISO 14001 Standard will contribute to the sustainable development of the Universities located in the Lambayeque Region-Perú.

	Valor	gl	Sig. asymptote (2 caras)
Chi-square of Pearson	181,157	90	,000
Likelihood ratio	139,160	90	,010
Linear by linear association	5,545	1	,002
N° of valid cases	319		

Source: Questionaire applied.

In the statistical processing it is observed that the bilateral sig is lower than ,05 and the calculated chi is higher than the chi table. Therefore, it is concluded that the environmental management program based on ISO 14001 will contribute to the sustainable development of the universities located in the Lambayeque Region-Peru.

Specifics hypotheses:

H_1: The Environmental Management Program based on the ISO 14001 Standard will contribute to the conception of the environmental plan of solid waste of the Universities located in the Region Lambayeque-Perú.

	Valor	gl	Sig. asymptote (2 caras)
Chi-square of Pearson	173,107	90	,001
Likelihood ratio	137,460	90	,005
Linear by linear association	5,344	1	,010
N° of valid cases	319		

Source: Questionaire applied.

In the statistical processing it is observed that the bilateral sig is less than ,05 and the calculated chi is greater than the table chi. Therefore, it is concluded that the program of environmental management based on ISO 14001 will contribute to the conception of the environmental plan of solid waste of the Universities located in the Region Lambayeque-Peru.

H_2: The Environmental Management Program based on ISO 14001 will contribute to the execution of the environmental plan of solid waste of the Universities located in the Region Lambayeque-Perú

H_2:	Valor	gl	Sig. asymptote (2 caras)
Chi-square of Pearson	183,607	90	,000
Likelihood ratio	149,260	90	,005
Linear by linear association	5,144	1	,001
N° of valid cases	319		

Source: Questionaire applied.

In the statistical processing it is observed that the bilateral sig is less than ,05 and the calculated chi is greater than the table chi. Therefore, it is concluded that the program of environmental management based on ISO 14001 will contribute to the execution of the environmental plan of solid waste of the Universities located in the Region Lambayeque-Peru.

H_3: The Environmental Management Program based on ISO 14001 will contribute to the evaluation of water quality of the Universities located in the Region Lambayeque-Perú

	Valor	gl	Sig. asymptote (2 caras)
Chi-square of Pearson	133,407	90	,002
Likelihood ratio	149,260	90	,003
Linear by linear association	5,124	1	,000
N° of valid cases	319		

Source: Questionaire applied.

In the statistical processing it is observed that the bilateral sig is less than ,05 and the calculated chi is greater than the table chi. Therefore, it is concluded that the environmental management program based on ISO 14001 will contribute to the evaluation of water quality of the Universities located in the Region Lambayeque-Peru.

Conclusions

In the present research The Environmental Management Program based on the ISO 14001 Standard will contribute to the conception of the environmental plan of solid waste and also the evaluation of water quality of the Universities located in the Region Lambayeque-Perú.

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