BRIEF REPORT

Legal Rules for the Response and Recuperation Before the Phenomenon of El Niño Costero, Peru, 2017

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ABSTRACT

Objective: The aim of this study was to identify regulations that were established and implemented as an emergency disaster response to intense rain and floods generated by the El Niño coastal phenomenon.

Methods: A search was conducted for the legal norms approved and published between December 1, 2016 and December 31, 2017, in *El Peruano*, Peru's official newspaper. Twenty legal norms involved disaster emergency response, rehabilitation, and the reconstruction of the affected regions.

Results: Forty-six legal norms were identified, of which 41 % were aimed at the declaration of emergencies and alerts, 22 % to facilitate the management of economic resources, and 13 % for coordination actions. Sixty-two percent of the approved standards were set for the regional level, 22 % for the national level, 7 % for the municipal level, and the remaining 10 % corresponded with more than 1 level of government.

Conclusions: The actions during and after the El Niño coastal phenomenon required the approval of standards included in the legal framework of Peru's disaster risk management, as well as a large number of unforeseen standards to address existing regulatory gaps and specific problems that occurred during this natural disaster.

Key Words: El Niño phenomenon, natural disasters, Peru's health system, Peruvian regulation, Southern Oscillation

On January 2017, the sea surface temperature increased abruptly, reaching values above 26° C in several places of the northern coast of Peru, which activated the second band of the Intertropical Convergence Zone early and intensely off of the coast, generating very heavy rains in this part of the country.[1] This event was called *El Niño Costero* (coast), which was of moderate magnitude and lasted 6 months, from December 2016 to May 2017. Due to its characteristics, it was compared with the one that occurred in 1925 – the third most powerful in the 20th century due to its impact on the Eastern Pacific associated with heavy rains and floods in Peru and Ecuador between February and April.[2] The first affected region was Ica on January 25, 2017, followed by Lima on January 29, 2017.

The final assessment of the damage of the natural event indicated 162 casualties, 500 injured, and 19 missing. There were 285 955 affected people according to the Centre for Research on the Epidemiological of Disasters (CRED), of which the largest numbers were found in the regions of Piura, La Libertad, and Lambayeque. There were 66 093 destroyed and uninhabitable homes, as well as 354 destroyed schools. Sixty-four health facilities were destroyed and 1044 affected. In the transport sector, there were 489 destroyed bridges and 4391 km of destroyed roads.[3] Additionally, to the physical damages, there were outbreaks of leptospirosis, dengue, Zika, and chikungunya, mainly in the northern regions of the country. It should be mentioned that the outbreak of dengue in Piura produced over 48 000 cases (a 530 % increase in relation to the previous year) up to epidemiological week 41, with 42 confirmed deaths.[4] Because of the event, the gross domestic product of 2017 was reduced 1.7 % between the months of January and May, the national average of the public investment fell by 7.0 %, and, in the most affected regions, it fell by 19.5 %.[3]

In order to respond to the emergency, the Peruvian State, within the framework of the regulations of the National Disaster Risk Management System (SINAGERD), issued the norms to facilitate and reinforce the response, rehabilitation, and reconstruction measures in the levels of national, regional, and local governments.

The legal system of Peru establishes varied regulations to simplify administrative procedures and mobilize resources in a timely manner to face emergencies and disasters. The main regulation is the declaration of the State of Emergency which is approved by the President with the agreement of the Council of Ministers. This general regulation can be completed by specific norms for shelters, food, purchase,

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education, health, and others, which will be approved by each ministry with the agreement of the Prime Minister.

Another regulation is the declaration of public health emergency that is applicable to a high risk of or the existence of an outbreak or any event that affects the continuity of health services, and it is declared by executive decree and signed by the President of the Republic. The public health emergency declaration is a national regulation that does not differ from region to region, which is implemented in 1 or more regions or municipalities depending on need and risks. On the other hand, health alerts are approved by the Ministry of Health in case of a natural or man-made event that can be a risk or affect the health network. There are red, yellow, and green alerts with scope on the health care facilities. The red alert is activated when the health facilities are affected by an event, and other alerts are activated as measures of preparation before the occurrence of a potential event. The scope of these regulations is national, regional, or municipal level depending on the magnitude of the emergency.

The objective of this study was the identification of the legal norms that were put into practice at the national, regional (or departmental), and local (or municipal) levels of response, rehabilitation, and reconstruction of the social and productive sectors affected by the natural event.

METHODS

The legal norms published in Peru's official state gazette, *El Peruano*, that met the following inclusion criteria were included in the study. Laws, executive decrees, ministerial resolutions, and approved chief decisions published between December 1, 2016, and December 31, 2017, were generated by the Congress of the Republic, Ministries, regional governments, local governments, and national organizations, in order to respond, rehabilitate, and reconstruct. Those rules that extended the previously approved emergency declarations were excluded.

Based on these criteria, the search was conducted in Peru's official gazette, *El Peruano*, and the results were presented considering the month of publication, purpose, scope of application, and sector to which these legal norms corresponded.

RESULTS

Forty-six legal norms were identified, of which 63 % were approved from February to April 2017. Forty-one percent of the norms were aimed at the declaration of emergencies and alerts, 22 % were approved to facilitate the management of the economic resources, 13 % for coordination actions, and the rest for productive reactivation, donations management, purchases and shelters, and other interventions.

FIGURE 1

Distribution of Emergency Declarations and Warnings Issued for El Niño Costero Phenomenon, Perú 2017.

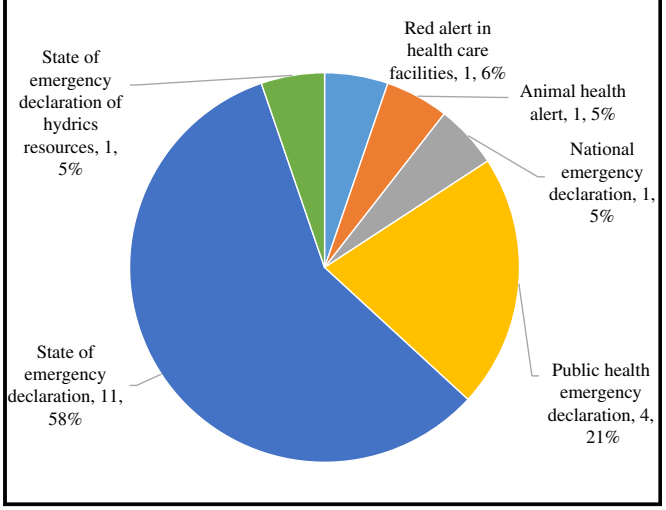

Figure 1 shows that, of 19 norms that declared emergencies and alerts, 58 % corresponded to emergency states that included 879 municipalities or districts in 109 provinces of 14 regions of the country, with an average validity of 124 days. While 21 % of the standards corresponded to public health emergencies with an average validity of 102 days for 8 regions – Tumbes, Piura, Lambayeque, Cajamarca, La Libertad, Ancash, Lima Provinces, and Ica – Piura was the only region declared in a national emergency due to a large-scale disaster lasting more than a year. In addition, a water emergency declaration was issued, an alert for animal health in 11 regions, and a red alert issued by the Ministry of Health because of the event on health services in the regions of Tumbes, Piura, and Lambayeque. Moreover, the yellow alert in health for 24 regions of the country was added.

The declarations of public health emergencies and health alerts were aimed at responding to outbreak diseases such as dengue, Zika, leptospirosis, and chikungunya mainly in the regions of the north coast and Ica; and the recurrence of Malaria in Piura, associated with high temperatures, humidity, and stagnant water caused by the natural event.[5]

Considering the purpose of the published norms, it was found that 12 of them set forth measures for emergency response, 8 for reconstruction, and 26 included actions for response and rehabilitation; 62 % of the total approved norms were set for the regional level, 22 % for the national level, 7 % for the municipal level, and the remaining 10 % corresponded to implementing legal devices at the national, regional and municipal level.

Out of the total approved standards, 37 % were multi-sector, mainly for the implementation of response and rehabilitation

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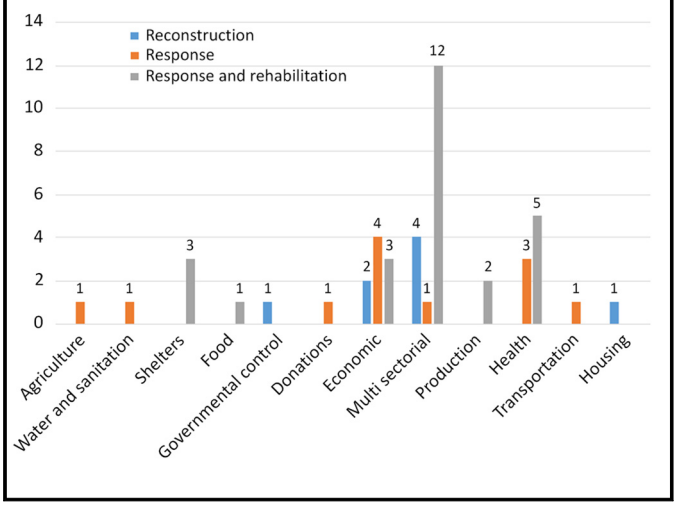
FIGURE 2

Distribution of Legal Norms Approved by Objective and Sector, El Niño Costero Phenomenon, Perú 2017.



actions through State of Emergency declarations, extraordinary rules for reconstruction, and a norm that reinforced the management of the emergency by the Ministry of Defense. Of the total, 20 % corresponded to the economic sector to authorize supplementary credits of 66 million dollars, economic subsidies, and economic transfers from the national to the regional and municipal levels. It included the budgetary modification of the sectors to address the emergency with their existing resources. These norms were complemented with 2 norms of the production sector for the agricultural reactivation and fishing, and for the small- and medium-size companies.

Seventeen percent of the norms were from the health sector for the declaration of public health emergency and 3 specific norms for economic transfers to the regions and facilities for contracting goods and the mobilization of health personnel. Other regulations issued were for shelters, food, transport, water and sanitation, and housing sectors.

Figure 2 shows that the economic and housing sectors had specific rules to facilitate reconstruction actions, whereas the other sectors took refuge in the law of reconstruction and its regulations. The economic sector generated norms of extraordinary measures, granting subsidies to those who did not own destroyed homes and property; and the housing sector generated norms for the implementation of new construction projects.

DISCUSSION

National regulations set forth special processes for emergencies that affected the municipal, regional, and national levels. In the case of the El Niño Costero phenomenon, 2 groups of norms were approved, 1 of which was provided in the SINAGERD that approves the declarations of emergencies to activate specific procedures for the operational response of the emergency and to facilitate rehabilitation. The other group of norms, which was 59 % of the total approved norms, which were not foreseen and contributed to solve specific problems and to cover legal gaps, was identified as needs before the effects of the natural event.

Among the unforeseen norms was the law that created a specific authority for reconstruction responsible for the planning and implementation of the plan. This was in contradiction to previous regulations of the SINAGERD, which had established that, in disasters of great magnitude, such as the one declared in the Piura region, the party responsible for the reconstruction would be the Presidency of the Council of Ministers in coordination with the Ministry of Economy and Finance. Those entities should propose the institutional scheme and financial strategy of the reconstruction to the National Council for Disaster Risk Management. Another unforeseen aspect was the incorporation of soup kitchens into temporary and free food assistance for the affected people.

Twelve of the 19 approved norms, declarations of the state of emergency, were mandatory to respond in case of emergencies and were considered the likely legal mechanisms to be implemented and to assure an integral response and rehabilitation. These regulations allowed the fast-track purchase of humanitarian goods (tends, foods, medicines, and others), modification of the budget at 3 government levels, facilitation of entrance of donations, setup of shelters, and mobilization of resources of the different sectors in humanitarian actions. Other norms were also important but not mandatory because the declaration of the state of emergency has a multi-sectorial scope and includes measures in all sectors.

For both the El Niño Costero disaster in 2017 and the Pisco earthquake in 2007, the number of approved norms was under the 55 that were approved on that occasion. The majority of norms approved were economic in nature and meant to facilitate the entry of goods through customs.[6] Both the El Niño disaster and the Pisco earthquake had required the approval of extraordinary economic measures to face the emergency. The greater number of approved norms for the entrance of international donations during the earthquake of Pisco in comparison with El Niño could be associated with the difference of the donations. For the Pisco emergency, 5500 tons[6] arrived versus the 232 tons that arrived for El Niño in the regions of Tumbes, Piura, and Lambayeque.

The El Niño phenomenon was an unexpected event for 2017, according to the hydro meteorological predictions[7] but was expected for the 2016 event, before which the legal mechanisms were set forth to face it as the obligation that all levels of government and public organizations had considered and implement their contingency and multi-sector plans. However, the problems that occurred, especially at the local

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level, showed that the implementation of those plans was limited for the emergency response of the event.

El Niño Costero was managed as a level 4 emergency, that is, under the leadership of the regional governments and coordination of the National Institute of Civil Defense (INDECI). Piura, which was considered a level 5 region, was an exception. Thus, Piura remained under the coordination and leadership of the Ministry of Defense through the national emergency operations center with the support of INDECI and which mobilized international cooperation.

The development of legal mechanisms, systems and procedures to cope with the needs of affected populations, should be an important part of emergency preparedness to address the national and international humanitarian assistance effectively toward the development of a framework approved by the affected community and country. Regarding this legal framework, the guidelines for the domestic facilitation and regulation of international disaster relief and initial recovery assistance (also known as *IDRL Guidelines*), developed by the International Federation of Red Cross and Red Crescent Societies, will be useful to develop norms and procedures in the countries to facilitate and regulate inside and outside relief, strengthening the domestic laws and policies.

CONCLUSION

The response to the emergency generated by the El Niño phenomenon and subsequent recovery actions required the approval of norms provided for in the legal framework of disaster risk management in the country, and a greater number of regulations not foreseen to address existing regulatory gaps and to face specific problems that appeared during this event.

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