

# **Latin America Land Administration Network (LALAN), Covid19 and SDG 4**

**Rodolfo SALAZAR, Ginella JACOME (Ecuador) and Dimo TODOROVSKI  
(Netherlands)**

**Key words:** Latin America, land administration, academic networks, Covid19, SDG 4

## **SUMMARY**

Networks of academic and educational institutions are proven platforms for knowledge sharing and experiences in education exchange. During the International Workshop LALA LADM+, 5-9 November 2018 in Quito Ecuador, organized by University ESPE Ecuador and Kadaster International together with Faculty ITC University of Twente from the Netherlands, Latin America Land Administration Network - LALAN was established. The objective of this network is to: perform activities that can support capacity development and increase knowledge in both fit-for-purpose and responsible land administration within the Latin America Land Administration Network of education institutions. Unfortunately, at the beginning of 2020 a pandemic Covid19 started to spread all around the world. Although with the advanced use of IT technologies many people and organizations adopted to work from home fast, this had effect on the work of networks. In addition, implementation of SDGs came under question and in our case the SDG 4 which is: ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. This paper presents how the performance of LALAN network planned activities were influenced by Covid19 in reflection of SDG 4.

# **Latin America Land Administration Network (LALAN), Covid19 and SDG 4**

**Rodolfo SALAZAR, Ginella JACOME (Ecuador) and Dimo TODOROVSKI  
(Netherlands)**

## **1. INTRODUCTION**

The paper provides an overview of activities undertaken and academic institutions involved in the process of establishment of Latin America Land Administration Network – LALAN, Covid 19 and SDG 4. The activities were conducted in Quito, Ecuador, in the period 5 - 9 November 2018, during the International Workshop LALA LADM+. The International Workshop LALA LADM+ was organized by ESPE University Ecuador and the School for Land Administration Studies (SLAS). SLAS is a joint initiative between the Faculty of Geo-information Sciences and Earth Observations - ITC, University Twente and the Netherlands' Cadastre, Land Registry and Mapping Agency (Kadaster). SLAS is created with aim to build capacity in the land administration domain in developing and emerging economies, resulting in a reliable, practical, and transparent land administration; both in academia and in the public sector. Organizers initiated this workshop and invited representatives from academia and governmental agencies from all Latin America countries. Seven countries from Latin America accepted the invitation and took active participation. Representatives from Guatemala (5), Colombia (3), Brazil (2), Suriname (1), Peru (3), Bolivia (1) and Ecuador (40-60 in different time periods). From Europe, Spain (with 1 representative) and the Netherlands (with 4 representatives), were present at the workshop. The idea about establishment of the LALAN was launched on the first workshop day. During the informal parts of the event (e.g., lunch breaks, dinners, and coffee breaks), outside of the official workshop programme, the initial idea was further discussed with several participants that had additional ideas. After the positive welcome of the idea, last day preliminary objective and potential activities were presented. That was positively received by the audience and after the agreement was reached, LALAN was established.

Unfortunately, at the beginning of 2020 a pandemic Covid19 started to spread all around the world. Although with the advanced use of IT technologies many people and organizations adopted to work from home fast, this had effect on the work of networks. In addition, implementation of SDGs came under question and in our case the SDG 4 which is: ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. This paper presents how the performance of LALAN network planned activities were influenced by Covid19 in reflection of SDG 4.

In the following chapter two, different capacity development concepts and activities for higher education are reviewed. In the chapter three the establishment of LALAN is elaborated. In the following chapter four, the network's objective and planned activities for the coming period are presented. In the final chapter lessons from the impact of Covid19 and SDG 4 and on LALAN are derived.

## 2. CAPACITY DEVELOPMENT ACTIVITIES IN THE HIGHER EDUCATION

Capacity development is a key issue related to development policies and the sustainability of any measures of development. Since the *Paris Declaration on Aid Effectiveness*<sup>1</sup> in 2005, many countries recognized that “the capacity to plan, manage, implement, and account for results of policies and programmes, is critical for achieving development objectives”. With the following *Accra Agenda for Action*<sup>2</sup> in 2008, they recognized that “without robust capacity – strong institutions, systems, and local expertise – developing countries cannot fully own and manage their development processes” and therefore they committed themselves to strengthen capacity development. The process of capacity development is in itself an endogenous process. In 2014, the GLTN capacity development strategy articulated the objectives in relation to capacity development and expressed the necessity to put together teams and build entities not only in the content and process of land tools, but also in local context and knowledge, and in training and learning practices. In this perspective, GLTN positions itself as a “catalyst, bridge builder and facilitator of the necessary linkages, methodologies and learning partnerships for action” and looks for partnerships with in-country organisations that “represent and articulate the contextual information, perspectives, experiences and positions on land. Capacity development is one of the key issues for designers of land administration systems. Traditionally, capacity development focused on the short term by means of staff development through formal education and training programs to meet the lack of qualified personnel. But capacity development measures must be seen in the wider context of developing and maintaining institutional infrastructure in a sustainable way. Only then can capacity needs be met and adequate responses to the societal, organisational, and individual level be made.” (Williamson, et. al., 2010).

### *Levels and dimensions of Capacity Development*

Capacity Development relates to three levels: societal level, organisational level and individual level. These levels relate to their application of capacity in society and have been identified as follows:

- The broader system/societal level. The highest level within which capacity initiatives may be cast is the system or enabling environment level. For development initiatives that are national in context the system would cover the entire country or society and all subcomponents that are involved. For initiatives at a sectoral level, the system would include only those components that are relevant.
- The entity/organisational level. An entity may be a formal organisation such as government or one of its departments or agencies, a private sector operation, or an informal organisation such as a community based or volunteer organisation. At this level, successful methodologies examine all dimensions of capacity, including its interactions within the system, other entities, stakeholders, and clients.
- The group-of-people/individual level. This level addresses the need for individuals to function efficiently and effectively within the entity and within the broader system. Human Resource

---

<sup>1</sup> Paris Declaration of Aid Effectiveness (2005)

<sup>2</sup> Accra Agenda for Action (2008)

Development is about assessing the capacity needs and addressing the gaps through adequate measures of education and training (FIG, 2008).

European Union (EU) continuously acknowledges the importance and the value of capacity development. There are funds available for this every consecutive year, and here good examples are Horizon Europe and Erasmus+ ([https://ec.europa.eu/programmes/erasmus-plus/node\\_en](https://ec.europa.eu/programmes/erasmus-plus/node_en)).

For ITC, capacity development implies building capacity in domain-specific knowledge, skills, and attitude at the individual and institutional/societal levels. ITC therefore aims to achieve both individual and collaborative capacity building. This development reflects what happens in modern societies with a strong private sector. Individual capacity development aims will be addressed through education (ITC, 2019). ITC has long experience in capacity development in both academic/education and public/governmental sectors. This done via Master's Programme, Postgraduate Diploma programme, Short Courses, Tailor Made Trainings and Refresher courses. In addition, in the last decade establishment of academic networks was proven as fruitful platform for knowledge and experience sharing in the level of academia and education. Examples are: UN-HABITAT Global Land Tool Network – GLTN (<https://gltn.net/>), Eastern Africa Land Administration Network – EALAN (<https://ealan-network.org/>), NEGLA etc.

Based on these experiences, where collaboration is a key factor in development, we came to idea to establish similar network in Latin America. The needs and ideas about that are presented in the following chapter three.

### **3. ESTABLISHMENT OF LALAN**

Based on experiences of SLAS actors involved, both ITC and Kadaster, believe and work together in establishment of network that could facilitate knowhow and knowledge sharing within established or potential new networks in land administration domain. Here we consider land administration as ‘the process of determining, recording and disseminating information about tenure, value and use of land when implementing land management policies’ (UN/ECE, 2005). We used the opportunity of several present academic participants at our International Workshop LALA LADM+ to make an inventory about presence of the topic of land administration in the bachelor degree and master programmes in the countries/universities present at the workshop. The following representative’s actors from respective countries were consulted:

- ESPE University – Ecuador;
- Universidad de San Carlos De Guatemala;
- Universidad Distrital – Colombia;
- Universidad Politecnica De Valencia – Spain;
- Universidad de Campinas - Brazil
- Universidad San Martin De Porres, Universidad Catolica San Pablo – Peru.

It was identified that land administration domain is taught only as a separate subject in some Bachelors programmes or in some master specializations, in Latin America countries. On the other hand, practice about performance of the public sector in regard of land administration was not as good as it could be, but all participants acknowledged that some international projects (e.g. World Bank funded projects or related donor projects) are active in most of Latin America region. A gap between a particular country land policy/strategy, operations, and academia in land administration is evident. Having said all this the need and justification of the LALAN was derived.

#### **4. THE OBJECTIVE AND ACTIVITIES OF LALAN**

After this initial thoughts and considerations next logical step was to articulate the objective of this network and initial planned activities. Those were presented during the closing ceremony of international workshop LALA LADM+. Here follows the objective of LALAN:

*The objective of this network is to: perform activities that can support capacity development and sharing knowledge in both fit-for-purpose and responsible land administration within the Latin America Land Administration Network of education and research institutions.*

In addition to the objective of LALAN the initial possible activities to be performed in the coming period were listed as follow:

- Articulation of the LALAN – Statement
- Network and secretariat (management, coordination, & assessment of the network activities)
- Short courses for Land Professionals in the education (train the trainer approach)
- Education and Knowledge sharing (review of current curriculum in Land Administration with aim of update and improve).

The objective and the possible activities are considered as a good starting point and all present actors from academia and education institutions were optimistic for positive outcome from this network. It was also suggested for the future activates to invite other interested partners from other countries.

#### **5. LESSONS LEARNED LALAN Covid19 and SDG 4**

At the beginning of 2020, a pandemic Covid19 started to spread all around the world. Although with the advanced use of IT technologies many people and organizations adopted to work from home fast, this had effect on the work, education and of networks. Within the higher education the following challenges: practicals and examination under social distancing became difficult and were identified. In addition, also benefits like all sessions are videorecorded, and freedom in time planning for students were recognized. Specifically, for LALAN planned activities like workshop on sharing experience and knowledge of developing curriculums in the domain of

land administration was postponed for better times when traveling and meetings would come to normal again.

On the other hand, implementation of SDGs came under question and in our case, we are looking at the SDG 4 which is: ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

The 2020 Sustainable Development Goals Report (The Lancet. Public Health, 2020) revealed that SDG 4 appears not to be met and many of the world's students have been deprived of formal education during the COVID-19 outbreak. According to the UNESCO Technical Cooperation Group (2020) (UNESCO, 2020), many of the long-term educational changes will continue after COVID-19 and that, in the context of the current SDG 4, those changes may include: consolidating learning distance learning, increasing the student-teacher ratio, homeschooling, and the extensive use of the Internet as a teaching resource.

These changes affected the continuity of the formation of the LALAN network. In distance learning, the difficulty of sharing time among participants is motivated by attention to their main university activities. The student-teacher ratio has increased due to budget cuts and a decrease in teachers. Homeschooling has also increased student-teacher tutorial contact with the consequent consumption of time and avoided field work. The use of the Internet as a didactic resource has not been enough to consolidate the participation of the members of the network.

As a consequence of this pandemic, some SDG 4 targets for 2030 (UN. Regional Information Centre for Western Europe, 2020) will be affected. Regarding to SDG 4.3 and SDG 4.4 targets, it is not possible to know whether equal access for all women and men to affordable and quality technical, vocational and tertiary education has improved, including university; there is also no information about the increase or decrease in the number of students who have technical skills for suitable employment. Nor was it possible to know about SDG 4.5 on gender disparities in education and guarantee equal access to a high level of education for vulnerable people, including indigenous peoples.

More difficult to achieve have been SDG 4, SDG 7, SDG B and SDG C due to the lack of certainty to ensure that all students acquire the knowledge and skills necessary to promote development through education for sustainable development and sustainable lifestyles. Among others, the main difficulties have been seen in the increase in the number of scholarships available to developing and least developed countries, for enrollment in higher education, including the professional training of technicians, engineers and scientists in the field of land administration, among others. A consequent problem has been the difficulty of substantially increasing the supply of qualified teachers, including through international cooperation for teacher training at participating universities.

On the other hand, the tendency to increase the number of infections by COVID-19 has not been controlled and the uneven behavior in the countries whose participants started the network is clearly seen, as can be seen in Figure 1.

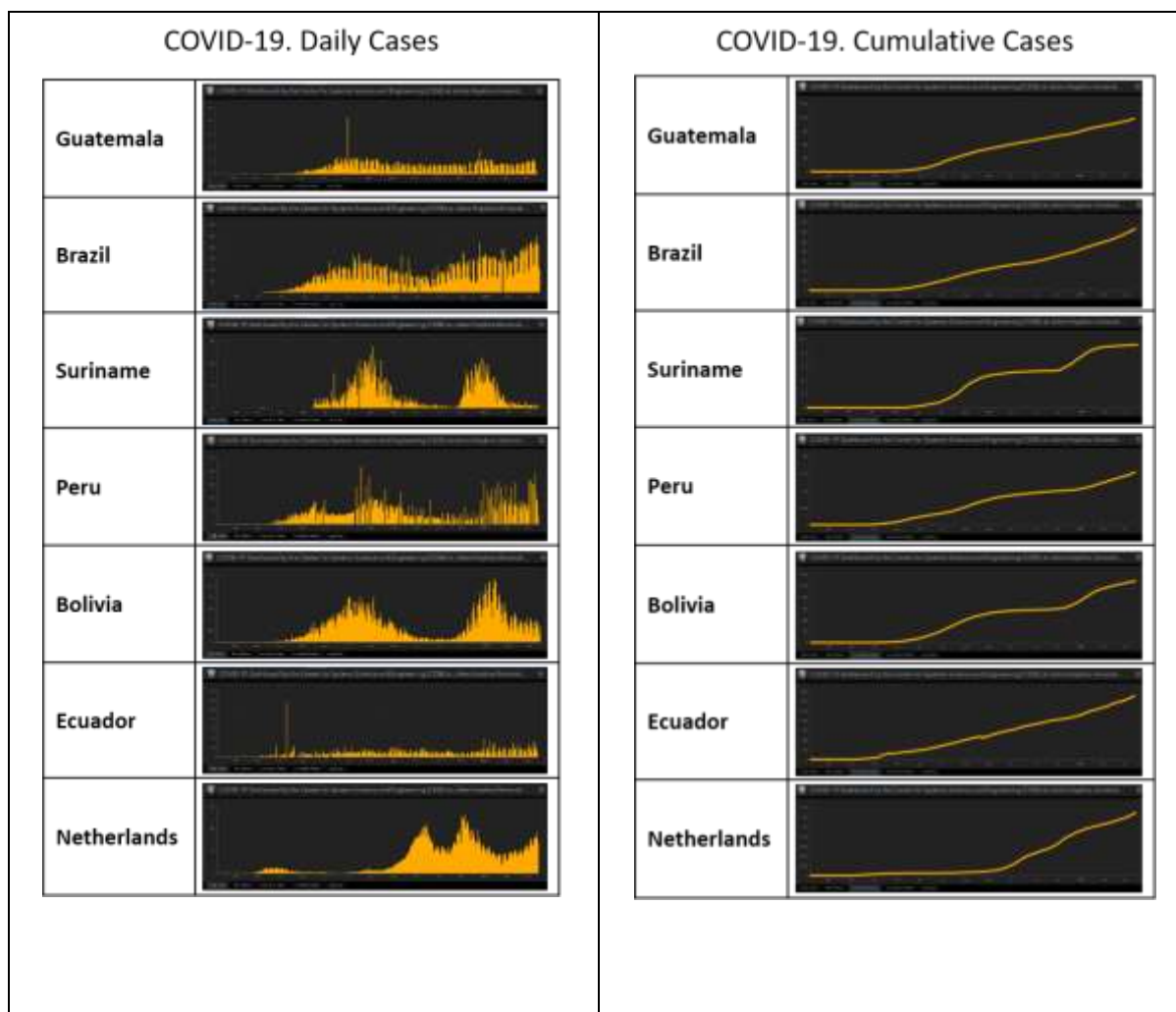


Figure 1. COVID-19 daily and cumulative cases from february 2020 to march 2021  
 Source: Johns Hopkins University. Coronavirus Research Center: <https://coronavirus.jhu.edu/map.html>.  
 Retrieved on 30.03.2021

In July, during the summer of 2020, a survey conducted by de Kiewit (2020) at the University of Twente in the Netherlands (NL), analyzed some indicators regarding the well-being of students, which were categorized into psychological and somatic symptoms. Recurrent negative experiences were found in the first group: feeling tired or having low energy, difficulty sleeping, headaches and back pain. In the second group, positive feelings such as feeling that you have someone to turn to when things go wrong, feeling good about yourself, and feeling affection for someone were the most important. An interesting preliminar conclusion was that only NL respondents scored high on experiences related to positive feelings, while non-NL respondents scored significantly higher on items related to negative feelings such as feeling tense, anxious, nervous, and unhappy.

According to Rein and Klinke in Fra Paleo (2015), the three main characteristics of risk knowledge are complexity, scientific uncertainty and socio-political ambiguity. If the COVID-19 pandemic is considered a biohazard, the survey clearly identifies the difficulty in identifying and quantifying causal links between a multitude of potential candidates and specific adverse effects, the limited knowledge about the origins and development of the pandemic, and the ambiguity of the perception manifested in the student survey.

In conclusion, since all risks are a mixture of the three characteristics, it is evident that COVID-19 has a high level of complexity, high scientific uncertainty, and high socio-political ambiguity. Therefore, these difficulties because the COVID-19 pandemic have been causes for the lack of integration of the LALAN network.

## REFERENCES

ITC, (2019). About ITC, ITC capacity development landing page. Retrieved from: <https://www.itc.nl/about-itc/#capacity-development> on 1.02.2019.

FIG, (2008). Capacity assessment and land administration, by Enemark, S. and van der Molen, P., International Federation of Surveyors, FIG and FAO, p.37, FIG Publication 41, Copenhagen, Denmark

Fra Paleo, Urbano, (2015). Risk Governance. The Articulation of Hazard, Politics and Ecology, Springer Dordrecht Heidelberg New York London. Chapter 2. Risk Governance and Resilience: New Approaches to Cope with Uncertainty and Ambiguity (Ortwin Renn and Andreas Klinke)

The Lancet. Public Health, (2020). Retrieved from: [https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667\(20\)30189-4/fulltext](https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(20)30189-4/fulltext) on 30.03.2021

de Kiewit, A. (2020) UT Student well-being during Covid19 Survey, July 2020 [https://www.utwente.nl/.uc/f0fe92f520102db7d640186f03102f66a9ad44cd1f31200/Student%20wellbeing\\_Covid\\_20112020.pdf](https://www.utwente.nl/.uc/f0fe92f520102db7d640186f03102f66a9ad44cd1f31200/Student%20wellbeing_Covid_20112020.pdf)

UN/ECE, (2005). Social and Economic Benifit of Good Land Administration United Nations Economic Commission for Europe (UN/ECE): HM Land Registry, London, on behalf of the UNECE WPLA

Williamson, Enemark, Wallace, and Rajabifard, (2010). Land Administration for Sustainable Development, ESRI Press Academic, Redlands, California. Chapter 11 Capacity Building and Institutional Development.

UNESCO, (2020). Revising SDG4 Indicators in Anticipation of Post-COVID Changes in Education Systems1 April 2020. Retrieved from: <http://tcg.uis.unesco.org/wp-content/uploads/sites/4/2020/04/Revising-SDG-4-Ind-Post-Covid.pdf> on 30.03.2021

UN. Regional Information Centre for Western Europe, (2020). Retrieved from: <https://unric.org/en/sdg-4/> on 30.03.2021



## BIOGRAPHICAL NOTES

**Rodolfo Salazar**, is a senior Lecturer at the Department of the Earth Sciences and Civil Engineering of Universidad de las Fuerzas Armadas ESPE – University ESPE, in Quito, Ecuador. He is member of the Academic Research Network in Territory Management and Geospatial Information Technologies (RIGTIG) from REDU-Ecuador. He obtained his MSc degree in Geo-Information Management at ITC, in 2001 and is finishing his PhD at the University of Santiago de Compostela, Spain in Sustainable Soil and Land Management. Last 10 years he had academic positions as Director of the Earth Sciences and Civil Engineering Department and Vicerector of Research at Universidad de las Fuerzas Armadas ESPE as well as collaborator at academic and public Institutions in Ecuador (IGM, IEE, CEAACES, MIDUVI). Since 2018 he has been registered as Researcher at SENESCYT. His research interest include land administration, land management, national and regional spatial planning strategies for sustainable urban and regional development with focus on spatial, social, economic and environmental conditions and the exposure and vulnerability to multi natural hazards.

**Ginella Jácome**, is a senior Lecturer at the Department of Civil Engineering and Earth Sciences of Universidad de las Fuerzas Armadas ESPE – University ESPE, in Quito, Ecuador. She is member of the Academic Research Network in Territory Management and Geospatial Information Technologies (RIGTIG) from REDU-Ecuador and the Pan-American Institute of Geography and History (IPGH-Ecuador). She obtained MSc degree in Geo-Information Management at ITC, in 2007. Last 10 years were also on different managerial positions in some public institutions in Ecuador (SENPLADES, CEAACES, MCCTH), and since 2015 she has been collaborating as Academic Advisor of ESPE's Head Department. Her research interest include land administration and land management, national and regional spatial planning strategies and sustainable urban and regional development with focus on spatial, social, economic and environmental conditions.

**Dimo Todorovski**, is Portfolio Holder Education of PGM department and M-GEO Masters coordinator of Geo-information for Land Administration specialization at Faculty of Geo-Information Science and Earth Observation (ITC), the University of Twente, in Enschede, the Netherlands, and he is FIG Commission 2 Chair Working Group 2.1: Developing Academic Networks (term 2019-2022). He holds a PhD from University of Twente and he obtained MSc degree in Geo-Information Management at ITC, in 2006. Over the 19 years of professional engagement (1992-2011) in the Agency for Real Estate Cadastre in the Republic of Macedonia, last 12 years were on different managerial positions (Digitizing, GIS and Geo-ICT departments), and the final year he was Head of the Department for International Cooperation and European Integrations. His research interest focuses on land administration and land governance, and on land administration in post-conflict contexts.

## CONTACTS

**Rodolfo Salazar and Ginella Jácome**

---

Latin America Land Administration Network (LALAN), Covid19 and SDG 4 (11084)  
Rodolfo Salazar, Ginella Jácome (Ecuador) and Dimo Todorovski (Netherlands)

FIG e-Working Week 2021  
Smart Surveyors for Land and Water Management - Challenges in a New Reality  
Virtually in the Netherlands, 21–25 June 2021

Universidad de las Fuerzas Armadas ESPE – University ESPE  
Department of Civil Engineering and Earth Sciences Quito,  
ECUADOR  
Tel.: +593(0)2 3989 400  
[rjsalazar@espe.edu.ec](mailto:rjsalazar@espe.edu.ec) and [gijacome@espe.edu.ec](mailto:gijacome@espe.edu.ec)  
web site: <https://espe-el.espe.edu.ec/>

**Dimo Todorovski**

University of Twente Faculty for Geo-Information Sciences and Earth Observation – ITC  
Department of Urban and Region Planning and Geo-Information Management  
P.O. Box 217  
7500 AE Enschede,  
THE NETHERLANDS  
Tel: +31 (0)53 4874329  
Fax: +31 (0)53 4874575  
[d.todorovski@utwente.nl](mailto:d.todorovski@utwente.nl)  
web site: [www.itc.nl](http://www.itc.nl)

---

Latin America Land Administration Network (LALAN), Covid19 and SDG 4 (11084)  
Rodolfo Salazar, Ginella Jacome (Ecuador) and Dimo Todorovski (Netherlands)

FIG e-Working Week 2021  
Smart Surveyors for Land and Water Management - Challenges in a New Reality  
Virtually in the Netherlands, 21–25 June 2021