



## Do Indigenous Peoples' Rights To Lands And Natural Resources Extend To Transboundary Aquifers Contaminated By Mining Production Within The Lake Titicaca Region?

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The Autonomous Binational Authority of the Lake Titicaca – Desaguadero River – Lake Poopó – Coipasa Salt Lake System regulates Peruvian and Bolivian water resources. Mining is also important in these States that give grants to extraction companies. However, without any efficient regulation, mining contaminates surface waters and groundwater. Because water transcends borders and indigenous communities live around Lake Titicaca, when contamination happens, indigenous peoples' lands are contaminated. Hence, this paper assesses indigenous peoples' rights to lands and natural resources besides mining companies' rights to land access and mineral extraction in the context of groundwater contamination in the Lake Titicaca region.

### Introduction

Lake Titicaca is the largest lake in South America (UNESCO-WWAP, 2003). Due to pressure on natural resources, Peru and Bolivia put forward a Binational Master Plan for the Lake Titicaca – Desaguadero River – Lake Poopó – Coipasa Salt Lake (TDPS) System to protect their waters, and in 1996, they established an Autonomous Binational Authority of the TDPS System (ALT) (OAS, 1996).

The ALT rules water management. Nevertheless, the legislations of the ALT do not include groundwater despite its exposure to mining contamination (UNESCO-WWAP, 2003) and the Draft Articles on the Law of Transboundary Aquifers that guide aquifer States (ILC, 2008). The ALT also does not embrace indigenous peoples' rights. While Peru and Bolivia are parties to the International Labour Organisation (ILO) Convention No. 169 that guarantees indigenous peoples' rights over lands and natural resources, both States also signed the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) (UNGA, 2007; ILO, 1989). Subsequently, to assess indigenous peoples' rights to lands and natural resources beside groundwater mining contamination in the Lake Titicaca region, Bolivian and Peruvian national laws remain relevant.

Consequently, this paper aims to emphasise the linkages between indigenous peoples' rights, the law of transboundary aquifers, and mining law within the Lake Titicaca region. First, it presents the TDPS System and assesses international law. Then, the paper considers the ALT and Peruvian and Bolivian national laws, and finally, it provides recommendations.

## **Lake Titicaca Region and the TDPS System**

This Section offers an overview of the Lake Titicaca region and the TDPS System by presenting the geographic area, the situation of indigenous communities, and mining operations.

### ***Geographic Situation***

The TDPS System, located in Peru and Bolivia, is divided between four major basins; Lake Titicaca, Desaguadero River, Lake Poopó and Coipasa Salt Lake. With a surface area of 56,300 km<sup>2</sup>, the Lake Titicaca basin represents the main basin. Peruvian rivers are the principal tributaries of the TDPS System (UNESCO-WWAP, 2003).

Aquifers also constitute the TDPS System. The main aquifers are situated in the middle and lower basins in Peru in the Lake Titicaca region, and in the strip that extends from the south of Lake Titicaca to Oruro in Bolivia (UNESCO-WWAP, 2003).

However, the TDPS System is particular for its water insecurity due to rain variability and the manifestation of extreme events (UNESCO-WWAP, 2003).

### ***Indigenous Peoples***

Because the population is mostly indigenous within the TDPS System, indigenous traditions play a significant role within the Lake Titicaca region (UNESCO-WWAP, 2003).

The primary sector contributes highly to the economy of the region, principally with agriculture and mining (OAS, 1996). However, Bolivian and Peruvian governments administered reforms in order to change land ownership in the 1950s, and then, rural property became fragmented and agriculture diminished (UNESCO-WWAP, 2003).

Moreover, indigenous peoples are affected by environmental damages that reduce their access to lands and natural resources, and disrupt their cultural habits. They also suffer from extensive poverty and face difficulties to meet their basic needs (UNESCO-WWAP, 2003; OAS, 1996).

### ***Mining Operations***

Mining activities within the TDPS System are important and are mainly located in the southern part of the TDPS System. On a smaller scale, mining industries operate in

the upstream basin, in Peru (OAS, 1996). Nevertheless, mining production is undoubtedly not without consequences.

Mining is the main cause of heavy metal water contamination and salinization of waters. Such contamination that makes water very acidic and exceeds permissible limits for human consumption has been found particularly in the southern area of the TDPS System. Within the Copacabana Bay of Lake Titicaca and in the upstream basin in Peru, high concentrations of heavy metals have also been measured (UNESCO-WWAP, 2003; OAS, 1996).

Thus, while the ALT provides a structure to protect waters within the TDPS System, mining contamination is significant. Most studies and the ALT consider mainly surface waters, although mining contaminates surface water as much as groundwater. Indigenous peoples living within these territories and using waters might be affected.

## **International Law**

Throughout this Section, an assessment of international law, particularly focused on international water law, mining law, and the rights of indigenous peoples is undertaken.

### ***International Water Law***

While international water law has been developed through the UN Convention on the Non-Navigational Uses of International Watercourses (UNWC) adopted in 1997, the adoption of the soft law document, the 2008 Draft Articles on the Law of Transboundary Aquifers, represents a further development (UN, 1997; ILC, 2008).

The UNWC defines 'watercourse' as 'a system of surface waters and groundwaters constituting [...] a unitary whole and normally flowing into a common terminus' (UN, 1997). Consequently, this legal instrument embraces surface water and groundwater and pursuant to Article 8(1) of the UNWC, States have a duty to cooperate. Article 5(1) emphasises riparian States' use of the watercourse through 'an equitable and reasonable manner' (UN, 1997). Article 10(2) ensures that the States must respect all 'vital human needs' (UN, 1997).

Furthermore, pursuant to Article 7(1), States shall consider 'all appropriate measures to prevent the causing of any significant harm to other watercourses States' (UN, 1997). Consequently, the duty to cooperate between riparian States constitutes a requirement to achieve the principles of equitable and reasonable use of the water resources and the prevention of significant harm. These main principles also appear within the Draft Articles on the Law of Transboundary Aquifers (Leb, 2013).

Aquifers are bodies of rocks that store important quantities of groundwater (Miletto, 2004). An aquifer is either: *unconfined* as it is open to the surface environment and water seeps from surface; or *confined* due to an impermeable rock layer preventing water from seeping into the aquifer except in partial connection. An aquifer is

described as *fossil* when water is stored deeply under rock sediments (Miletto, 2004). Most aquifers receive and transmit water through a hydrologic cycle, and if an aquifer becomes contaminated, in particular for aquifers without any recharge zone and unrelated to surface water, cleaning is difficult (Eckstein & Eckstein, 2005).

While ‘transboundary aquifer’ means an aquifer traversing a political boundary between two or more States, the UNWC includes, under Article 2(a) and (b), only aquifers connected to surface waters that contain part located in different States. A confined aquifer unconnected with any surface water crossing an international boundary or located completely in another State does not fall within the scope of the UNWC. Moreover, it does not embrace transboundary aquifers unrelated to any surface water and disconnected from the hydrologic cycle (Eckstein & Eckstein, 2005; UN, 1997).

Provisions of the Draft Articles have a similar scope to the UNWC. While Article 4 of the Draft Articles re-establishes the equitable and reasonable utilisation of the waters, Article 5(2) of the Draft Articles includes the consideration of ‘vital human needs’ (ILC, 2008). Similarly, aquifer States must also prevent any significant harm to other States and take appropriate measures under Article 6(1). Article 12 ensures the prevention of transboundary aquifer contamination. Respectively, Articles 7 and 8 state the duty to cooperate and to exchange data and information between aquifer States and Article 9 encourages bilateral or regional agreements (ILC, 2008).

Nevertheless, there is an important distinction between the UNWC and the Draft Articles. Under Article 3 of the Draft Articles, ‘each aquifer State has sovereignty over the portion of transboundary aquifer or aquifer system located within its territory’, which is absent in the UNWC (ILC, 2008). Consequently, although they do not make reference to water contamination and indigenous rights, the UNWC and the Draft Articles endorse States to use their surface waters and groundwaters with a special attention to vital human needs. However, Article 3 of the Draft Articles reduces the scope of the law on transboundary aquifers.

### ***Mining Law***

While no international mining law exists, most States own their minerals. Either the State owns minerals and gives extraction rights to private companies, the State possesses the minerals but State-owned companies execute mining, or the person located on the land owns minerals and gives mining rights to others. The latter method involves indigenous peoples in general (Southalan, 2012).

Moreover, each jurisdiction differently considers mineral rights. Some States ensure that a mineral right is a property right, while others deny its property value and some affirm that it is a unique right with property characteristics. A mining right constitutes one of the mineral rights and allows a right to extract minerals, which is usually called concession. Consequently, these rights exist only when a government grants an individual legal permit (Southalan, 2012).

Land is either privately or publicly owned. Consequently, mineral rights are often separately controlled or owned through the land’s surface and companies must make separate arrangements for possessing land access and land use in order to develop

their mineral rights. The mining right ensures the holder can do all the necessary mining activities on lands (Southalan, 2012).

Before the holder of the permit starts mining exploitation, States may request additional approvals relating to environmental impacts and management of the mine development that might be considered within the environmental impact assessment (EIA) (Southalan, 2012). Thus, without this process, mining have impact on local communities.

### ***Rights of Indigenous Peoples***

Indigenous peoples have a spiritual relationship with their ancestral lands (Pasqualucci, 2009). Indigenous peoples' rights are embraced within the ILO Convention No. 169 and the soft law document, the UNDRIP.

The right of self-determination is a fundamental principle for indigenous peoples. Under Article 3 of the UNDRIP, people can 'freely dispose of their natural wealth and resources' and cannot 'be deprived of its own means of subsistence' (UNGA, 2007). Under Article 39 of the ILO Convention No. 169, States have a duty to recognise and protect boundaries of the land and water of indigenous peoples in regard to the right of self-determination (ILO, 1989). Consequently, this right is relevant to understand indigenous peoples' rights overall.

The ILO Convention No. 169 reflects the right of indigenous peoples to participate in decision-making under Articles 6 and 7 (ILO, 1989). This legal instrument provides indigenous peoples' rights to be consulted by the State even though natural resources are under State ownership. However, the UNDRIP goes further and requires 'free, prior and informed consent' (Orellana, 2002; UNGA, 2007). Consultation and participation go hand in hand with indigenous peoples' rights to lands and natural resources.

The ILO Convention No. 169 guarantees States' obligations to safeguard the environment of indigenous peoples. Pursuant to Article 15, natural resources pertaining to indigenous peoples' lands must be protected and these peoples have a right of participation towards natural resources. The term 'natural resources' includes water resources that constitute a 'basic resource for the survival of indigenous communities' (Parriciatu & Sindico, 2012; ILO, 1989). Article 32(2) of the UNDRIP also emphasises that in the use of lands and natural resources, consultation must be undertaken (UNGA, 2007).

Furthermore, Article 14 of the ILO Convention No. 169 underlines the rights of ownership of indigenous peoples over their lands and Article 13(2) states that the concept of territories includes the total environment of the occupied and used areas. However, Article 15(2) that stipulates the possibility of States' ownership after consultation with indigenous peoples limits indigenous ownership (ILO, 1989).

Similarly, the Inter-American Court on Human Rights (IACtHR) ensures that property rights provide automatic resource rights. In the case *Mayagna (Sumo) Awas Tingni Community v. Nicaragua*, the IACtHR mentioned that '[i]ndigenous groups [...] have the right to live feely in their own territory' as 'the land must be recognized and

understood as the fundamental basis of their cultures, their spiritual life, their integrity, and their economic survival' (IACtHR, 2001). The case *Saramaka v. Suriname* confirmed that a State cannot restrict property rights to indigenous peoples through mining activity in an indigenous territory. The term 'survival' includes States' assistance to safeguard indigenous peoples' special relationship with their territory and authorises them to continue living traditionally. However, in this case, the court concluded that the consent of indigenous peoples is only required for large-scale projects that would affect the integrity of peoples' lands and natural resources. If certain conditions are met, effective participation through consultation, free, prior and informed consent, and prior environmental impact assessments, the State can grant concessions (Pasqualucci, 2009).

Consequently, international legal instruments guarantee *de jure* indigenous peoples' rights over lands and natural resources. As a result, indigenous peoples can fully enjoy their collective rights over water resources. States must grant territorial titling through regulated procedures, which is limited by the survival of the indigenous communities (Parriciatu & Sindico, 2012). If contaminated groundwater infringes upon the survival of indigenous communities, it might be in violation of indigenous peoples' rights and in breach of States' protection for 'vital human needs' in regards to the UNWC and the Draft Articles.

## **ALT and Peruvian and Bolivian National Laws**

### ***Law and Limits of the ALT***

While the ALT constitutes a supreme body and decides on waters' regulations within the TDPS System, Peru and Bolivia are responsible for the political functions of the ALT (UNESCO-WWAP, 2003). Pursuant to Article 16 of the Headquarter Agreement of the ALT, the realisation of the Master Plan must be considered through an annual plan adopted by the riparian States (*Convenio de Sede*, 1996). The Bolivian and Peruvian Development Ministry and Institute also enforce water laws and policies (UNESCO-WWAP, 2003).

Under Article 5 of its Statute, the ALT has various functions; particularly, the achievement of the Master Plan, the promotion of sustainable development and the consideration of, *inter alia*, projects that regulate the waters within the basin of Lake Titicaca, and the preservation and protection of ecosystems (*Estatuto de Creación y Funcionamiento de la ALT*, 1996).

Nevertheless, although Article 4 of the Statute provides that this body has a duty to enact legislation for water management, though the legislations of the ALT do not clearly define 'water' (*cf. Estatuto*, 1996). Under Article 6, the Master Plan requires projects to ensure water resources' availability in surface water or groundwater sources. Consequently, the Statute does not distinguish between surface water and groundwater. The Master Plan includes both, but only for implementing projects of irrigation and drainage. Moreover, although these legislations do not specifically mention the principles of the UNWC, they develop them broadly. For example, the ALT demonstrates cooperation between riparian States, exchange of information

within the TDPS System, and the obligation to preserve the quality of the water (*cf. Estatuto*, 1996; ALT, n.d.). However, the ALT does not seek to achieve the provisions of the Draft Articles.

Indigenous peoples are also absent from the scope of the ALT. Under Article 12(a)(1) of the Statute, the Master Plan must foster participation of the required actors and the Master Plan includes the participation of the future beneficiaries of the projects, but they do not define who the actors are and what their rights are (*cf. Estatuto*, 1996; ALT, n.d.). Thus, these instruments do not include any human perspective in the water management of the TDPS System, as required under the UNWC by vital human needs.

Regarding mining production, mining activities might be included as Article 5(e) states that the ALT must coordinate and prevent activities affecting the dynamics of the TDPS System. The Master Plan, however, stipulates that controls of mining contamination must be established (*cf. Estatuto*, 1996; ALT, n.d.). Subsequently, because the legal framework of the ALT has some failures, assessing Peruvian and Bolivian national laws is therefore pertinent.

### ***Water and Groundwater National Laws***

The body in charge of integrated water resources management must enact rules and under Article 12(b)(2) of the Statute, it must consider current legislation in Peru and Bolivia related to the water resources to improve the management of the water resources of the TDPS System (*cf. Estatuto*, 1996).

Riparian States have different approaches regarding water protection. Under Article 374, the Bolivian Constitution sets up an important place for guaranteeing all inhabitants' water access. Under Article 373(II), surface and groundwater resources are vulnerable. Pursuant to Article 377(II), border and transboundary waters must be protected for populations (*Nueva Constitución Política del Estado, Bolivia*, 2008). Similarly, the Irrigation Law under Articles 20 and 21 include traditional rights and water management by indigenous peoples. Article 5 of the Water and Sanitation Law affirms that water is essential for all humans (*Ley No. 2066, Ley de los Servicios de Agua Potable y Alcantarillado Sanitario*, 2000; *Ley No. 2878, Ley de Promoción y Apoyo al Sector Riego para la Producción Agropecuaria y Forestal*, 2004). Hence, the Bolivian water law does not distinguish surface water and groundwater, but stipulates water protection, including transboundary water protection, for its citizens.

In contrast to Bolivia, under Article 66 of the Peruvian Constitution, natural resources are national and the government holds sovereign rights over all natural resources (*Constitución Política del Perú*, 1993). Peru has a river basin water resources management, as Article 1 of the Water Resources Law includes surface water and groundwater. This provision also emphasises public participation in water management. Articles 3.5 and 64 allow native communities to use water resources on their lands and require their participation in water management. Article 90 of the Regulation of the Water Resources Law supports an imprescriptible right for native communities to use the water resources on their lands. Moreover, under Article 43 of the Regulation, the use of transboundary basins must be in conformity with

international law in force (*Ley No. 29338, Ley de Recursos Hídricos*, 2009; *Reglamento de la Ley de Recursos Hídricos*, 2010).

Consequently, while Bolivia protects transboundary waters for its population but does not embrace groundwater, Peruvian legislation ensures indigenous peoples' right to groundwater, as the Water Resources Law protects all water resources. Peru also guarantees the protection of transboundary basins such as in international law. Nevertheless, no legislation mentions the Draft Articles.

### ***National Mining Laws***

The Bolivian State retains ownership over minerals, as stated under Article 369 and 370 of the Constitution (*cf. Nueva Constitución*, 2008). Under Article 4 of the Mining Code, the government through individual grant concessions regulates mining. Article 31 stipulates that when the mining concession holder has received his concession, he has the right to explore and exploit minerals within the perimeter of the concession or outside depending on the agreement. Likewise, this legal instrument involves stakeholder participation and under Article 85, the concession holder or the mining company must control contamination. In virtue of Article 86, environmental damages must be alleviated (*Ley No. 1777, Código de Minería*, 1997).

In the case of transboundary impacts, under Article 167 of the Environment Law, an EIA must be undertaken. Article 70 of this legal instrument regulates mining disposals and dismantling and Article 71 protects waters once mining activities are finished (*Ley No. 1333, Ley del Medio Ambiente*, 1992).

Beside Bolivian mining law, the Preamble of the Peruvian General Mining Law stipulates States' ownership over minerals and the system of concessions relating to mineral use. Under Article 9, the concession owner has a right to exploit minerals granted. Article 222 prevents water contamination from discharges and Article 225 guarantees studies to prevent environmental contamination (*Ley General de Minería, Decreto Supremo No. 014-92-EM*, 1992).

Moreover, under Article 15 of the General Law of the Peasant Communities, the State must protect peasant communities from mining exploitation on their territories (*Ley No. 24656, Ley General de Comunidades Campesinas*, 1987). Hence, both riparian countries consider the environmental damages of mining and the importance of protecting their indigenous communities from mining impacts.

### ***National Rights of Indigenous Peoples***

The Bolivian Constitution recognises, under Articles 2 and 289, self-determination to indigenous peoples. Article 30 further guarantees indigenous peoples' rights to receive titling of their lands and benefit from exclusive use of their natural resources and Article 397 of the Constitution guarantees indigenous peoples' rights over property and their sustainable use of the land (*cf. Nueva Constitución*, 2008).

Furthermore, Article 78 of the Environmental Law ensures indigenous peoples' participation. In case of natural resources' exploitation, indigenous peoples must be consulted pursuant to Article 352 of the Constitution (*cf. Nueva Constitución*, 2008;



*cf. Ley No. 1333, 1992*). In regard to water resources, Article 20 of the Irrigation Law stipulates indigenous peoples' easement over water resources traditionally used (*cf. Ley No. 2878, 2004*).

Beside, in Peru, in virtue of Article 72.3 of the General Environmental Law, indigenous peoples have free access over natural resources to satisfy their subsistence needs. Pursuant to Article 72.1, any project to exploit natural resources located within indigenous lands must adopt measures (*Ley No. 28611, Ley General del Ambiente, 2005*). Article 64 of the Water Resources Law highlights States' obligation to recognise native communities in the water use (*cf. Ley No. 29338, 2009*).

Furthermore, under Article 1(a) of the General Law of the Peasant Communities, the State must guarantee native communities' land ownership (*cf. Ley No. 24656, 1987*). Similarly, under Article 17 and 18 of the Organic Law for the Sustainable Use of Natural Resources, native communities have priority and access to natural resources on the contiguous environment of their lands, unless third parties have exclusive rights or it is a State reserve (*Ley No. 26821, Ley Orgánica para el Aprovechamiento Sostenible de los Recursos Naturales, 1997*).

However, under Article 88 of the Constitution, indigenous lands can be bought and sold and before claiming their lands, indigenous communities must first form a legally recognised group. This constitutes a difficult process (Roldán Ortiga, 2004; *cf. Constitución, 1993*).

Therefore, both States provide a general legal framework to protect indigenous peoples' rights to lands and natural resources. In Bolivia, although indigenous peoples' rights are comprehensive, groundwater is not included in national laws. In Peru, while water legislation protects groundwater and includes indigenous peoples' rights, the process for indigenous peoples to claim their rights to lands and natural resources is cumbersome. Hence, these failures have led to indigenous protests and the mining economy often takes priority over indigenous peoples' rights.

## **Recommendations**

This Part provides recommendations of reforms to national laws and the ALT.

### ***Interconnection between Surface Waters and Groundwater***

Groundwater and surface water are interlinked. Therefore, conjunctive management with recognition of this connection is relevant, as both waters contaminate each other and possibilities of transboundary contamination are significant. Because groundwater stores more pollution than flowing surface water that can, to a considerable extent, clean itself, groundwater contamination is more serious (Utton, 1982).

In the TDPS System, as the Statute of the ALT includes mainly surface water and the Master Plan incorporates only groundwater in regard to projects for irrigation and

drainage, the interconnection between surface waters and groundwater is not embraced. Only Peru involves groundwater through a basin level approach (*cf. Estatuto*, 1996; ALT, n.d.; *cf. Ley No. 29338*, 2009). Consequently, the ALT fails to incorporate the provisions of the Draft Articles and steps should be taken to improve the protection of aquifers.

### ***Rights to Lands and Natural Resources and Public Participation***

While the mandate of the ALT covers water resources, it fails to include public participation, which would authorise indigenous communities to claim their rights to lands and natural resources.

Public participation is embraced within the obligation to conduct an EIA. It involves informing and consulting interested or affected persons in the process of decision-making (UNEP, 2004). The UNDRIP outlines the right of free, prior and informed consent, but neither the ALT nor riparian States legally include it (UNGA, 2007; *cf. Nueva Constitución*, 2008; *Ley No. 29785, Ley de Consulta Previa*, 2011). Consent is harder to achieve than consultation. The consent could help indigenous peoples to claim their rights to lands and natural resources in the case of groundwater contamination, but while the ILO Convention No. 169 only includes this right in cases of relocation, it has failed to include it in the context of any measures that might affect indigenous communities (ILO, 1989). Thus, national legislations reflect the failures at the international level, but reforms should be undertaken.

### **Conclusion**

Although the mandate of the ALT is to protect water resources, the ALT considers mining contamination and mining controls. The ALT has also developed projects to protect waters around Lake Titicaca from contamination. Nevertheless, the mandate of the ALT does not recognise the interconnection between surface waters and groundwater, and thus does not embrace the aquifers in the TDPS System, particularly the one underlying Lake Titicaca.

The ALT also fails to include, in proper terms, public participation and the rights of the populations living in the TDPS System, though a large number of indigenous peoples living around Lake Titicaca. However, this failure reflects international law, as the *Saramaka* case outlined that indigenous peoples' consent is required only for large-scale projects on indigenous territories.

While Peru and Bolivia legally include the obligation to conduct an EIA, they do not guarantee the consent of indigenous communities. Moreover, although the Bolivian law related to indigenous peoples' rights to lands and natural resources is the most impressive, it does not provide any legislation about groundwater. Conversely, Peruvian legislation includes groundwater and protects indigenous peoples' rights over all water resources. However, it does not clarify whether indigenous rights to lands and natural resources include groundwater, although within the ILO Convention No. 169, the interpretation of the total environment should include groundwater if it infringes the survival and physical integrity of the affected persons. Hence, the ALT

should further protect all indigenous peoples' rights as much as both riparian States, in order to respect international law. This includes the implementation of all provisions related to indigenous peoples' rights, but also participation in decision-making and access to justice to provide a complete framework allowing indigenous communities to claim their rights to lands and natural resources.

## References

- ALT (n.d.) *Plan Director*. Available from: <http://www.alt-perubolivia.org/web/publicaciones/plan-director.html> [Accessed 6 July 2016].
- Constitución Política del Perú 1993* (Diario Oficial 'El Peruano'). Available from: <http://www4.congreso.gob.pe/ntley/Imagenes/Constitu/Cons1993.pdf> [Accessed 5 July 2016].
- Convenio de Sede entre la Autoridad Autonoma Binacional del Lago Titicaca y el Gobierno de la Republica de Bolivia 1996* (ALT). Available from: <http://www.alt-perubolivia.org/web/nosotros/marco-legal/itemlist/category/3-normatividad-de-funcionamiento.html> [Accessed 15 June 2016].
- Eckstein, Y. & Eckstein, G. E. (2005) Transboundary Aquifers: Conceptual Models for Development of International Law. *Groundwater*. 43(5), 679-690.
- Estatuto de Creación y Funcionamiento de la ALT 1996* (ALT). Available from: <http://www.alt-perubolivia.org/web/nosotros/marco-legal/itemlist/category/3-normatividad-de-funcionamiento.html> [Accessed 15 June 2016].
- IACtHR, 2001. *Case of the Mayagna (Sumo) Awas Tingni Community v. Nicaragua*. Judgment of 31 August 2001, Series C No 79. Available from: [http://www.corteidh.or.cr/docs/casos/articulos/seriec\\_79\\_ing.pdf](http://www.corteidh.or.cr/docs/casos/articulos/seriec_79_ing.pdf) [Accessed on 7 June 2016].
- ILC, 2008. *Draft Articles on the Law of Transboundary Aquifers*. UN GAOR, 62d Sess., Supp. No. 10, UN Doc. A/63/10 (2008). Available from: [http://legal.un.org/ilc/texts/instruments/english/commentaries/8\\_5\\_2008.pdf](http://legal.un.org/ilc/texts/instruments/english/commentaries/8_5_2008.pdf) [Accessed 7 June 2016].
- ILO, 1989. *Indigenous and Tribal Peoples Convention No. 169*. C169. Available from: [http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100\\_IL O\\_CODE:C169](http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_IL O_CODE:C169) [Accessed 28 June 2016].
- Leb, C. (2013) The UN Watercourses Convention: the Eminence Grise behind Cooperation on Transboundary Water Resources. *Water International*. 38(2), 146-155.
- Ley General de Minería, Decreto Supremo No. 014-92-EM 1992* (Diario Oficial 'El Peruano'). Available from: [http://www.peru.gob.pe/docs/PLANES/94/PLAN\\_94\\_DS%20N%C2%BA%20014-92-EM\\_2008.pdf](http://www.peru.gob.pe/docs/PLANES/94/PLAN_94_DS%20N%C2%BA%20014-92-EM_2008.pdf) [Accessed 17 June 2016].
- Ley No. 1333, Ley del Medio Ambiente 1992* (Gaceta Oficial de Bolivia). Available from: <http://www.ine.gob.bo/indicadoresddhh/archivos/alimentacion/nal/Ley%20N%C2%BA%201333.pdf> [Accessed 17 June 2016].
- Ley No. 1777, Código de Minería 1997* (Gaceta Oficial de Bolivia). Available from: [http://www.udape.gob.bo/portales\\_html/portalsIG/atlasUdape1234567/atlas09\\_2007/documentos/C%C3%B3digo%20de%20Mineria.pdf](http://www.udape.gob.bo/portales_html/portalsIG/atlasUdape1234567/atlas09_2007/documentos/C%C3%B3digo%20de%20Mineria.pdf) [Accessed 17 June 2016].

- Ley No. 2066, Ley de los Servicios de Agua Potable y Alcantarillado Sanitario 2000* (Gaceta Oficial de Bolivia). Available from: <http://www.aaps.gob.bo/?p=323> [Accessed 15 June 2016].
- Ley No. 2878, Ley de Promoción y Apoyo al Sector Riego para la Producción Agropecuaria y Forestal 2004* (Gaceta Oficial de Bolivia). Available from: <http://www.lexivox.org//norms/BO-L-2878.html> [Accessed 15 June 2016].
- Ley No. 24656, Ley General de Comunidades Campesinas 1987* (Diario Oficial 'El Peruano'). Available from: <http://faolex.fao.org/docs/pdf/per20093.pdf> [Accessed 24 June 2016].
- Ley No. 26821, Ley Orgánica para el Aprovechamiento Sostenible de los Recursos Naturales 1997* (Diario Oficial 'El Peruano'). Available from: [http://www.ana.gob.pe/media/95192/ley\\_26821.pdf](http://www.ana.gob.pe/media/95192/ley_26821.pdf) [Accessed 24 June 2016].
- Ley No. 28611, Ley General del Ambiente 2005* (Diario Oficial 'El Peruano'). Available from: <http://www.minam.gob.pe/wp-content/uploads/2013/06/ley-general-del-ambiente.pdf> [Accessed 17 June 2016].
- Ley No. 29338, Ley de Recursos Hídricos 2009* (Diario Oficial 'El Peruano'). Available from: [http://www.ana.gob.pe:8090/media/7747/ley\\_recursos\\_hidricos\\_29338.pdf](http://www.ana.gob.pe:8090/media/7747/ley_recursos_hidricos_29338.pdf) [Accessed 15 June 2016].
- Ley No. 29785, Ley de Consulta Previa 2011* (Diario Oficial 'El Peruano'). Available from: <http://www.minem.gob.pe/minem/archivos/Ley%2029785%20Consulta%20Previa%20pdf.pdf> [Accessed 15 June 2016].
- Miletto, M. (2004) *The Invisible Resource Transboundary Aquifers: an Opportunity for International Cooperation*. OAS. Policy Series No: 3.
- Nueva Constitución Política del Estado, Bolivia 2008* (Gaceta Oficial de Bolivia). Available from: <http://www.santacruz.gob.bo/archivos/PN22102010122236.pdf> [Accessed 30 May 2016].
- Orellana, M. A. (2002) *Indigenous Peoples, Mining and International Law*. International Institute for Environment and Development and World Business Council for Sustainable Development. Report No: 2.
- Organization of American States (OAS), (1996) *Binational Master Plan for Integral Development of the Lake Titicaca, Desaguadero River, Poopó, Coipasa Salt Marsh System (TDPS System) Executive Summary*. OAS. Available from: <http://www.oas.org/dsd/publications/classifications/publicationswr.htm> [Accessed 30 May 2016].
- Parriciatu, M. & Sindico, F. (2012) Contours of an Indigenous Peoples' Right to Water in Latin America under International Law. *International Human Rights Law Review*. 1(1), 211-236.
- Pasqualucci, J. M. (2009) International Indigenous Land Rights: A Critique of the Jurisprudence of the Inter-American Court of Human Rights in Lights of the United Nations Declaration on the Rights of Indigenous Peoples. *Wisconsin International Law Journal*. 27(1), 51-98.
- Reglamento de la Ley de Recursos Hídricos 2010* (Diario Oficial 'El Peruano'). Available from: <http://www.ana.gob.pe/media/1097010/reglamento%20lrh%20-%20n%C2%BA%2029338.pdf> [Accessed 15 June 2016].
- Roldán Ortiga, R. (2004) *Models for Recognizing Indigenous Land Rights in Latin America*. The World Bank Environment Department, Biodiversity Series. Paper No: 99.

- Southalan, J. (2012) *Mining law and policy: international perspectives*. Sydney: The Federation Press.
- UN, 1997. *Convention on the Law of Non-Navigational Uses of International Watercourses*. G.A. Res. 51/229, UN GAOR, 51st Sess., UN Doc. A/RES/51/229. Available from:  
[http://legal.un.org/ilc/texts/instruments/english/conventions/8\\_3\\_1997.pdf](http://legal.un.org/ilc/texts/instruments/english/conventions/8_3_1997.pdf)  
[Accessed 30 May 2016].
- UNESCO – World Water Assessment Programme (WWAP), (2003) *Water for People, Water for Life: The United Nations World Water Development Report*. UNESCO and Berghahn Books. Available from:  
<http://unesdoc.unesco.org/images/0012/001297/129726e.pdf#page=480>  
[Accessed 30 May 2016].
- UNGA, 2007. *United Nations Declaration on the Rights of Indigenous Peoples*. A/RES/61/295. Available from:  
[http://www.un.org/esa/socdev/unpfii/documents/DRIPS\\_en.pdf](http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf) [Accessed 30 May 2016].
- UNEP (2004) *Environmental Impact Assessment and Strategic Environmental Assessment: Towards an Integrated Approach*. UNEP. Available from:  
<http://www.unep.ch/etu/publications/textONUBr.pdf> [Accessed 28 June 2016].
- Utton, A. E. (1982) The Development of International Groundwater Law. *Natural Resources Journal*. 22(1), 95-118.