7 Action Plan

The latest version of the Action Plan has been elaborated based on the information reviewed until June 30th, 2016. It will be completely updated as each EIA/PAGA is presented and approved by the ANLA. It is important to clarify that some of the actions do not correspond to an ongoing non-compliance, but they are aimed to strengthen the current measures.

The current status of the Action Plan has been evaluated with the following color coding:

Solved On track Pending

7.1 Former Action Plan

PS/EP	UF	Problem Description	Proposed action	Documents / Enforcement indicator	Deadline	Responsible	Current State
PS 1	2 y 3	Risks and impacts identification. Licenses.	Once the Environmental license is obtained for UF 2.2 and UF 3.2, the independent engineer must identify the risks and impacts, and if necessary, update the corrective Action Plan	Environmental License Resolution, adopted for the National Authority of Environmental Licenses (ANLA) and the Environmental Impact Assessment (EIA). Independent Engineer's Environmental and Social Due Diligence (ESDD) about the identification of risks and impacts. Action plan modification	Construction Start date for UF's 2 (October 16th, 2016) and 3 (August 16th, 2016).	Concessionaire Independent Engineer	The Concessionaire has identified risks and impacts for both UFs. The EIAs have been submitted to the ANLA. Pending license approval.
PS 3	2.2	Prevention of pollution. For UF2, neither the management plan for	Once the Environmental License is obtained, the independent engineer has to prepare the ESDD, in order	Environmental License. ESDD by the independent engineer.	Prior to construction start date for UF 2 (October 16th, 2016).	Concessionaire	

		prevention of water pollution due to the construction of Tesalia tunnel, nor the monitoring and follow-up are going to be defined until the approval of the EIA.	to define the prevention of pollution, and if necessary, to modify the Action Plan. Monitor the bacteriological, physical and chemical characteristics prior to the beginning of construction of the UF2, and to establish the Base Line. Measurements during construction and operation of the works, comparing to the baseline, in order to be able to verify the damage and take contingency measures. Implement an action plan that establishes prevention, correction and mitigation measures.	Corrective action plan that sets preventive, corrective and mitigation measures.		Independent engineer.	The Concessionaire has defined adequate preventive, corrective and mitigation measures for UF2.2. Pending the approval of the Environmental License.
PS 3	1,2, 3.1, 4 y 5	Prevention of pollution. The PAGA establishes the base line and monitoring, but the ESDD does not contain a record for the development of the base line of: water quality, air quality, gas emission, and emission of sound. The	Annex the documents where the base line established by the PAGA is evidenced. Set the frequency of monitoring during construction.	Base Line documentation, established by the PAGA	Prior to the start date of each UF. 1.1: April 15th, 2016 UF 3.1: May 7th, 20166 UF 4.1: September, 2016 UF 5: December, 2016	Concessionaire	 The base line was evidenced in the PAGAs for the parameters set. The monitoring reports will be reviwed during the construction phase.

		parameters that have to be taken into account are: Noise: dB (A) Air quality: SO2, NO2, PM10 Water quality: pH, DBO, DQO, total nitrogen, total phosphorus, oils and lipids, total suspended solids, total coliforms.		Annual Monitoring.	Each year in the start date		
PS3	ALL	Calculations of gas emission The Colombian regulations for CO2 emission quantification, define a standard that is lower than the one set in the PS of the IFC. Requires a clarification (Arup)	CO2 emissions can be quantified according to statements of PS3 for projects higher than 25.000 tons of CO2 annually. The concessionaire must prepare a document that includes detailed information about CO2 emissions from the activities of the project annually.	Publication and spreading of a report of CO2 emissions of the Project, each year.	Annually, from June 1st, 2016.	Concessionaire.	The quantification of CO2 emissions has not started yet.
PS 3	All	Prevention of pollution. Set the base line and monitoring for PM2.5, ozone.	Pre-construction Phase. Perform the base line for the measurement of PM2.5 and ozone. During construction: Define follow-up and monitoring periodicity.	Base Line Periodicity	A month before the start date of construction of each UF Each year,	Concessionaire	Despite the fact that the Action Plan proposed the measurement of PM2.5 and O3, the Concessionaire has developed a fist draft of a report which aims to justify that it is not necessary to measure these parameters for the

							project. In Arup's opinion, the Project does not utilize significant sources of air emissions and does not cause substantial impact on the air quality environment. Therefore, the monitoring of these parameters should not be a priority in the environmental management of the Project. This statement will be expanded and further explained in the biannual monitoring report.
PS 5	All	Compensation – Resettlement. The system for social compensation offered by the project to the communities located along the road is not clear. Detailed information that describes the inventory conducted, the mechanisms of compensation and its implementation is needed.	Submit the detailed social compensation system that describes the inventory conduced, the mechanisms of compensation and how does it is implemented in the Project. With this information, the independent engineering will prepare the ESDD	Submittal of the information of the social compensation system (resettlement), within the framework of the Resolution 545. ESDD by the independent engineer. Action plan if needed.	Prior to Project Finance March 30th, 2016. May 30th, 2016.	Concessionaire Independent engineer	The compensation plan is currently in progress and it is in line with the Resolution 545. It will be reviewed in parallel with the acquisition process.

PS 6	1.2, 3.1, 4.1 y 5	Prevention and conservation of biodiversity. The PAGA sets an area of influence and a base line with the abiotic and biotic characterization, but it does not define the follow-up and monitoring.	Document the follow-up and monitoring system for the area of influence and base line with abiotic and biotic characterization.	Document the monitoring system. Periodical follow-up report.	Prior to start date of each UF UF 1: April 15th, 2016. UF 3.1: May, 2016 UF 4.1: September, 2016 UF 5: December, 2016. Each year, having as reference the start date.	Concessionaire	A monitoring system is being established for the UF's with PAGA. It will be evaluated during construction monitoring.
PS 6	TOD AS	Supply Chain. There is no evidence in the ESDD that the source of the supplies is directly generated by the concessionaire or the suppliers, and given the case, if these ones have the permits required, in such a way that the habitat is not going to be affected negatively.	The concessionaire must submit the supporting information that evidences that the supply chain is produced by means of certificated suppliers that have the required permits to work.	Submittal of the certificates of the suppliers of the supply chain for each UF.	Until the start day of construction of each UF. UF 1: April 15th, 2016. UF 2: October, 2016 UF 3: may, 2016. UF 4: September, 2016. UF 5: December, 2016.	Concessionaire	Supporting certificates of suppliers are going to be submitted at the beginning of construction. This item will be evaluated during construction monitoring.
PS6	1.1	Materials supply. *Construction phase*. The documentation for the design of the rubble and excavation material Management Area (ZODME) was not at the level of a detail design. (Arup will review this point).	Proportion analysis of external stability and analyze the internal stability for the gabions wall. In general, is recommended to locate the gabions wall in a mass, 6 to 10 degrees towards the retained hillside.	Documentation of the design, validated by the independent engineer.	Prior to start date of works. April 1st, 2016.	Concessionaire	The detailed design of the ZODME's is being developed. So far, the Concessionaire has acquired 63% of the volume needed.

			Clarify the foundation details of the gabions wall. Is recommended for the embedment of the foundation to be twice the expected scour Depth. Thee concessionaire must include specifications for the filling material and the geotextile filter fabric between the wall and the filling gabions.				
PS6	5	Disposal of materials. The volumes to be eliminated are not consistent with the capacity of the ZODME. In Chapter 5, a ZODME is proposed with a total volume of 226.800 m3; however, by the reutilization of a 6% of excavation material, the estimated volume for disposal is 1.786.000 m3. The concessionaire has the intention to use 135.000 m3 of fillings and ramparts, with 28.000 m3 of landfills.	Submit to authorized third parties, in case that the volume set overcomes 1.786.000 m3. Define a percentage of excavation material from dumps. Evaluate the possibility of increasing the capacity of the ZODME established, having into account the environment and inside the characterized area of influence. Donate remaining material to areas outside the ones included in the Environmental License, only if it meets the authorization and licenses from a competent environmental	Obtaining of permits for more ZODMES and add them into the PAGA	Prior to construction start date. December, 2016.	Concessionaire	Permit certificates for the ZODME are evidenced.

			authority and in compliance to Article 59 and Act 1682 2013.				
PS8	2,3,4 y 5	Environmental: Archeology *Construction Phase* According to the results obtained during the archeological field studies phase, which determined that the project area has an archeological potential qualified as medium-high, and estimated the probability of archeological findings, the area is considered to have a risk of significant findings.	Include in the work calendar for these UF a minimum of 45 days of warning time to the Colombian Institute of anthropology and history (ICAHN for its Spanish acronym),and for the archeological recovery. Include training talks during the excavation phases to train the operations staff about the protocol in case of findings. Take prior measures with museums or municipal cultural institutions to guarantee the protocol for archeological relics transfer, according to the archeological management plan of the project.	Work Schedule adjustment. Training talks Supporting documents of agreement or arrangement with museums for relics transfer.	From the beginning of construction phase of each UF. UF 2: October, 2016. UF 3: May, 2016. UF 4: September, 2016. UF 5: December, 2016.	Concessionaire	Proposed measures will be taken into account during the construction phase.
EP2	2.1, 2.2, 3.1, 3.2, 4.1, & 5.	Permits and licenses *Construction phase* and *Preliminary phase (The project has a different calendar depending on the UF).* Neither licenses, PAGA nor permits have been obtained yet. The construction works	Delay the beginning of the Works, if necessary, until the date of the licenses' approval and/or the permits and PAGA, required for the interventions programmed for the corresponding UF. Once the license is obtained, submit it to the independent	Issuing of licenses and permits and the modification to program, if necessary.	Prior to beginning of works in each UF.	Concessionaire	Pending permits and licenses are in progress. So far, the Concessionaire has complied with the proposed schedule and no delays are expected.

		for a UF cannot start until the permits or licenses are approved for it.	engineer who performs the compliance analysis for the performance standards of the IFC, to update then the action plan.				The environmental license for UF3.1 was obtained.
EP10	All	Spreading *Preliminary Phase* A summary of EIA and PAGA must be available through internet	The concessionaire must upload either the EIA or the full PAGA or a summary of these ones, to its web page.	Summaries of EIA and PAGAs uploaded on the web page of the concessionaire.	Prior to the beginning of Works in each UF. UF 11: April 16th, 2016. UF 2: October, 2016. UF 3: May, 2016. UF 4: September, 2016. UF 5: December, 2016.	Concessionaire	 General information about the environmental management of the Project was uploaded in the web page. It should be updated periodically during construction phase.

7.2 New Action Plan

The proposed New Action Plan incorporates the changes referenced in the previous Action Plan. The actions tagged as green were removed since they have met compliance, while the remaining actions tagged as red or orange will remain as they are due to be addressed in upcoming months or during the whole life of the project.

8 General Recommendations

For this monitoring period, the Concessionaire has attended the vast majority of improvement opportunities that were presented in previous reports. In general terms, the social, environmental and hydrogeological management that is being given for UF 2.2 and UF 3.1 and 3.2 is adequate and is on track to comply with Equator Principles and Performance Standards of IFC.

Monitoring Analysis

- The current status of permits and licenses reflect that there is a significant advance in the license acquisition process for UF 2.2 and UF 3.1 and 3.2 and no delays in the start dates of works are expected. In addition, there is a buffer in the Works Schedule for both licensing processes, which gives an extra lapse of time for the obtaintion of the license.

Environmental

- The environmental management measures that have been considered so far in the development of the EIAs for UF 2.2 and UF 3.2 comply with the terms of references established in the Resolution 751, 2015 as well as with the IFC Performance Standards and Equator Principles.

Social

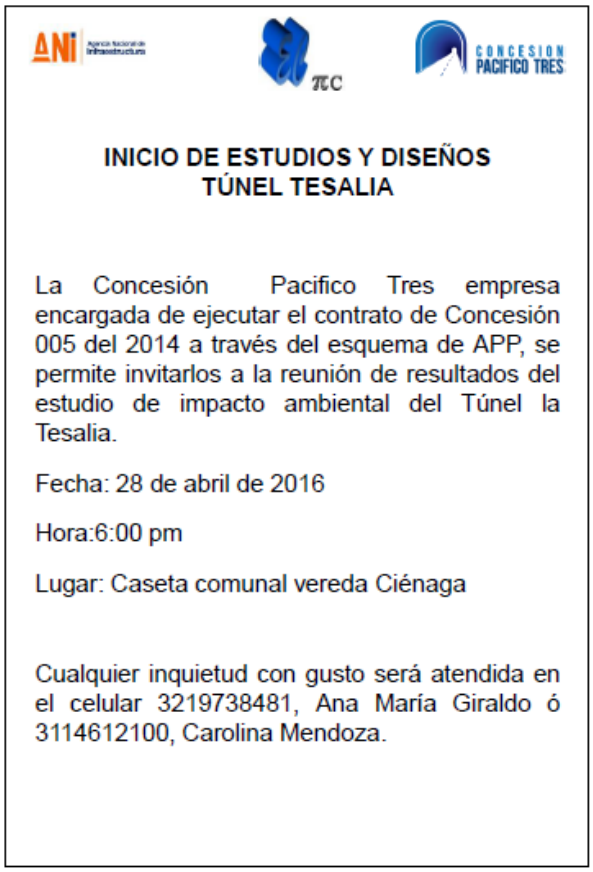
- The Concessionaire has provided all the evidences of the socialization meetings, including: Number of people called for attendance, number of total attendants, main conclusions and comments.
- The Concessionaire is having an adequate and efficient management of PQRS.

Hydrogeological

- For the hydrogeological aspect the Concessionaire provided robust documentation to answer all the pending items of previous reports. In Arup's opinion, the Concessionaire demonstrated to have deep knowledge of the area of study as well as management capacity to cope with possible environmental and social impacts. Moreover, Arup considers that the established monitoring frequency is adequate. However, it is important to advise that in the case surface water reductions are evidenced, the Concessionaire should re-adjust the monitoring schedule.

Appendix A: Photographic Record

Figure 2 Ejemplo de los volantes de invitación de cierre



INICIO DE ESTUDIOS Y DISEÑOS
TÚNEL TESALIA

La Concesión Pacifico Tres empresa encargada de ejecutar el contrato de Concesión 005 del 2014 a través del esquema de APP, se permite invitarlos a la reunión de resultados del estudio de impacto ambiental del Túnel la Tesalia.

Fecha: 28 de abril de 2016

Hora:6:00 pm

Lugar: Caseta comunal vereda Ciénaga

Cualquier inquietud con gusto será atendida en el celular 3219738481, Ana María Giraldo ó 3114612100, Carolina Mendoza.

Figure 3 Socialización EIA UF 2.2

Figure 4 and Figure 5, Presentation of the EIA for UF 3.2

Figure 6 and Figure 7 Tres Puertas Sector UF 3.2

Figure 8 and Figure 9 Landscape of Tunnel Tesalia Entrance

Figure 10 and Figure 11 Landscape of Tunnel Tesalia Exit