

Needs of AILAC countries in the implementation of the Convention and the Paris Agreement

In response to Decision 4/CP.24, paragraph 13 and the specific call for evidence from the Standing Committee on Finance for the **2020 Report on Needs of Developing Countries related to the implementation of the Convention and the Paris Agreement**, AILAC would like to provide with the following information:

From AILAC’s assessment, the implementation of the Paris Agreement poses significant challenges to all developing countries for the elaboration and implementation of long-term strategies for low-emissions and resilient development, which include transformation pathways and policy and institutional changes required to make these possible in line with the long-term goals of the Agreement; the progressive and effective formulation, update and implementation of Nationally Determined Contributions (NDCs) consistent with these long-term transformation pathways; the identification, planning and implementation of priorities, needs and actions on adaptation; improved knowledge of and averting, minimizing and addressing losses and damages derived from climate change adverse effects; planning, innovation, development, assembly, rollout, commissioning and operation of climate-compatible technologies; the formulation and execution of climate finance strategies in line with the finance long-term goal of the Paris Agreement enunciated in Article 2 paragraph 1 c); the establishment and consolidation of transparency systems; climate change education, training, public awareness, public participation and public access to information, and the future implementation of Article 6 market and non-market mechanisms, once they are agreed and designed.

AILAC countries represent together 1.48% of global GHG emissions¹ and are particularly vulnerable to the adverse effects of climate change. The IPCC’s special report on impacts of global warming of 1.5 °C, the report on Climate Change and Land, and the report in Oceans and Cryosphere in a Changing Climate, **indicate significant impacts for the Latin American region, which to date, harbours some of the countries that historically have been most affected by and are therefore most vulnerable to extreme weather events**². It is estimated that 6–8% of the population of Latin America and the Caribbean live in areas that are at high or very high risk of being affected by coastal hazards³ and also that global warming is projected to reduce the extent of tropical rainforest in Latin America, notably Central America, which can lead to a large replacement of rainforest by savannah⁴. These vulnerabilities already felt by and projected in AILAC countries could lead to scaling up poverty and widening social and economic inequities that in the end will limit the possibilities to improve the quality of life of our populations. Moreover, an IDB publication suggests that **to meet growing demand for sustainable infrastructure while also confronting the climate crisis, the Latin America and the Caribbean region needs to increase its investment in infrastructure by at least 2% of its gross domestic product, in order to go from US\$150 billion to US\$ 250 billion per year**⁵.

¹ Retrieved from Climate Watch Data, 2020: <https://www.climatewatchdata.org/ghg-emissions?regions=WORLD%2CAILAC>

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Global	Climate	Risk	Index	2019.
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 See https://germanwatch.org/sites/germanwatch.org/files/Global%20Climate%20Risk%20Index%202019_2.pdf.

³ IPCC SR Ocean and Cryosphere, Chapter 4, section 4.3.2.2, pg. 67

⁴ IPCC SR Global Warming of 1.5°C, Chapter 2, section 3.5.5.6, p263

⁵ Serebrisky, Tomás, Sustainable Infrastructure for competitiveness and inclusive growth, 2014, Inter-American Development Bank

AILAC countries have different experiences in determining needs for the implementation of the Paris Agreement and have used different methodological approaches to establish their financial needs, but overall we draw the following lessons from our work so far:

- a) The process of implementation of NDCs is continuously adjusting and being updated in response to new scientific/economic information, including by the elaboration of long-term strategies and related long-term investment planning processes;
- b) AILAC countries are currently working in the updating of their NDCs with adjusted costs to their implementation, that will be updated throughout this year (and the first one already being presented by Chile at the end of March 2020);
- c) AILAC countries are in the process of piloting or developing national systems of monitoring of international climate flows entering our countries, in some cases including private finance, estimations of costs of mitigation and adaptation actions, as well as in estimating finance gaps for ensuring the implementation of those mitigation and adaptation actions. These efforts are a first step towards the elaboration of national climate finance strategies but still further institutionalisation and mainstreaming of climate imperatives in development planning are necessary;
- d) AILAC countries recognise the need to improve methodological approaches and have dynamic models that allow to analyse complex scenarios and changing situations over time;
- e) Capacity building is a priority to AILAC countries with relation to fostering the understanding and estimation of needs for mitigation, adaptation and loss and damages related to climate change;
- f) Some AILAC countries, together with other 31 countries, are working on the Coalition of Finance Ministries for Climate Action where, among other things, are looking at aligning public expenditures with the 2.1 c) long term goal on finance.

Summary of financial needs of AILAC countries in the implementation of the Convention and the Paris Agreement

Country	Estimated total costs for mitigation	Estimated total costs for adaptation
Chile	N/A	N/A
Colombia	USD 2.07 billion by 2030	N/A
Costa Rica	USD 6.4 billion by 2030 USD 71 billion by 2050 ^a	USD 4 billion by 2030
Guatemala	USD 71 billion by 2030	N/A
Honduras ^b	N/A	N/A
Panamá	USD 4.4 billion by 2050	N/A
Paraguay ^c	N/A	N/A
Perú	USD 27.9 billion by 2030 ^d	USD 15.3 billion by 2030 ^e
Total AILAC	USD 107.3 billion by 2030 USD 75.4 billion by 2050^f	USD 19.3 billion by 2030

^aTransportation and sustainable mobility only

^bHonduras is currently in the process of developing an investment plan to its NDC, however no quantified information is available for the moment.

^cParaguay is in the process of updating its NDC (for adaptation and mitigation) with mitigation sectorial plans being elaborated, including specific mitigation actions, emissions reductions potential, institutional framework and timeframes. Implementation costs are being calculated and financing sources explored for mitigation and adaptation actions. Paraguay will design a strategy to assure that public finance is compatible with climate action.

^dEstimated costs only for 31 mitigation measures out of 62 measures

^eEstimated costs for not adapting to climate change, equivalent to 6.8% reduction of Peru's GDP

^fEstimated costs for Costa Rica (transportation and sustainable mobility sectors) and Panamá only

CHILE

- ❑ Chile has finished the consultation process to update its NDC in March 2020. The updated NDC refers to economy-wide emissions excluding the Land Use, Land Use Change and Forestry (LULUCF) sector. It is divided into five pillars: i) just transition and sustainable development, ii) mitigation, iii) adaptation, iv) capacity building, and v) Means of implementation (development and transfer of technologies, and financing).
- ❑ In terms of mitigation, the updated NDC:
 - ❑ Provides targets in terms of absolute emissions (95 MtCO₂eq in 2030), includes a carbon budget between 2020 and 2030 to not exceed 1,100 MtCO₂eq by 2030 and a peak in emissions by 2025. Chile also acknowledges its 2030 target as a medium-term goal towards achieving its long-term goal to GHG-neutrality by 2050.
 - ❑ Considers a reduction of at least 25% of total black carbon emissions by 2030 compared to 2016.
- ❑ As for the LULUCF sector, the updated NDC includes:
 - ❑ A separate unconditional target for the forestry sector. Chile has now doubled these targets from 100,000 hectares to 200,000 hectares of native forest proposed for sustainable management and recovery.
 - ❑ A target of 200,000 hectares to be reforested, out of which at least 100,000 hectares correspond to permanent forest cover, with at least 70% of native species.
 - ❑ A 25% reduction in emissions related to forest land degradation and deforestation of the primary forest, compared to a reference value of the average annual emissions between 2001 and 2013.
- ❑ Also, as part of its commitment for a low carbon emission economy, Chile has been promoting the adoption of clean energy technologies and reducing the carbon in its energy matrix without generating long-term damage to its production matrix.
- ❑ The determination of the mitigation pathway of the updated NDC poses many methodological challenges to guarantee the consistency between the different models used to project greenhouse gas emissions and to assess the impact of different mitigation actions. On the cost side, the election of different mitigation actions that support the updated NDC is based on a Marginal Abatement Cost analysis which results in the fact that some measures show negative mitigation cost. There are multiple reasons for this result, among others: i) capital-intensiveness; ii) imperfect information. For a full revision of the methodological challenges, please refer to the following report "Chilean NDC mitigation proposal: methodological approach and supporting ambition" ([https://mma.gob.cl/wp-content/uploads/2020/03/Mitigation NDC White Paper.pdf](https://mma.gob.cl/wp-content/uploads/2020/03/Mitigation_NDC_White_Paper.pdf)).
- ❑ The complexity of the modelling approach, assumptions and sensitiveness of some critical parameters to determine the cost involved in the implementation of the mitigations actions poses an additional challenge for policymakers to estimate this cost. A key source of uncertainty in the modelling process of climate policy actions is the discount rate that tells us the rate at which future damages and cost of climate change are discounted to the present. To this point, it is difficult to come up with just one figure that captures all the sources of uncertainties and market failures and allows to assess the capital investment cost and operational cost.
- ❑ We recognise the need to improve methodological approaches and have dynamic models that allow us to analyse complex scenarios on time. This allows us to adjust our baseline scenarios when we experience changes in crucial parameters and also in the enabling conditions of the country.

COLOMBIA⁶

- ❑ Colombia's NDC has a 2030 goal for emissions reductions of 20% with respect to BAU, and 30% with international support. Colombia's National Planning Department, in collaboration with research institutions, established that the economic benefits of implementing the current NDC would be translated into a 0.15% GDP growth rate greater than BAU scenario for the 2020-2040 period, using a general equilibrium model. The cost of achieving the mitigation actions contained in the NDC for the 2020-2030 period is equivalent to 0.7% of Colombia's GDP (equivalent to 2.1 billion USD of 2017). This value does not take into account adaptation measures.
- ❑ It has also been estimated that **the finance mitigation gap**, i.e. the difference between the costs of mitigation actions and the amount of finance to address climate change today, is of USD 207 million (\$675 billion Colombian Pesos of 2018) annually, **i.e. a total of USD 2.07 billion for the period of the NDC**. The current gap in public investment is more than 50% of the required level so new sources must be implemented.
- ❑ Moreover, the aggregated impact of climate change on the Colombian economy is negative. Several estimates have been done to quantify the cost of inaction to climate change that include incurred costs by extreme weather events in the last decade and their projections using economy-wide models that show reductions in productivity. Particularly, La Niña event between 2010-2011 caused direct damages of USD 7.7 billion according to estimates of the Economic Commission for Latin America and the Caribbean (ECLAC) and the Inter-American Development Bank (IADB). These damages were concentrated in the transport, household, energy, and agriculture sectors. Moreover, El Niño event in 2015 affected 1.2 million hectares of croplands and left almost 21.3 % of the country's municipalities without access to reliable water supply, which in general translated into a decrease of 0,7% of the GDP due to the loss in the productive capacity of the economy. It has been estimated that **in the context of estimated climate scenarios⁷, the cost of inaction to the Colombian economy is 0.5% of GDP**, less than a scenario without climate change.
- ❑ Colombia is in the process of updating its current NDC with new estimates that will consider updated and sector-specific information, including for both mitigation and adaptation. Additionally, it will perform studies of the subnational impacts of climate change in Colombia, prepare guidelines and implement the National Emissions Trading System, update estimates of the financial gaps in mitigation and adaptation, and formulate its national long-term strategy of carbon neutrality for 2050. Also, a Bill for Sustainable Development is being developed with fiscal and economic instruments to invest on low-carbon and resilient activities as part of it.

COSTA RICA

- ❑ Its NDC has an adaptation and a mitigation side. **Investment needs for the 28 measures included on its NDC is estimated at USD 10.4 billion**, out of which **USD 6.4 billion correspond to mitigation** and **USD 4 billion to adaptation**. Costa Rica developed this analysis as its NDC Partnership Plan⁸ conceived as a programmatic strategy to facilitate access to public and private financial resources and to facilitate a donor coordination process (see Annex 1).
- ❑ Costa Rica is currently working in the updating of its NDC in order to align it to the ambition level of its Decarbonization Plan, which is its Long-Term Strategy by 2050. Costs-related to the implementation of this Plan are currently being assessed and will be ready by October 2020.

⁶ Information, values and references identified by Colombia in this document are subject to update as new information and data are being gathered and reviewed.

⁷ The climate scenarios used are based on the scenarios developed by the IPCC, particularly A1, A1B and B2.

⁸ For more information about the NDC Partnership Plans and the engagement strategy visit www.ndcpartnership.org

- ❑ It is however relevant to underline that the **estimated costs for the implementation of the Sustainable Mobility and Transportation element of this Decarbonization Plan (2050) has already been quantified in USD 71 billion.**
- ❑ The initial methodology applied to the NDC Investment Plan, is being improved with a decarbonization investment methodology which includes information required to inform the financial costs associated with individual measures as well as costing other needs related to: studies/analyses, capacity gaps (resources and knowledge), pilot project requirements, pre-feasibility studies, and information on possible investment mechanisms. For the financial cost, only capital expenditures (CAPEX) are included. The analysis also includes qualitative information related to whether finance is more likely to come from the private or public sector⁹.

GUATEMALA

- ❑ Its NDC covers adaptation and mitigation. **Investment needs for 40 mitigation measures is estimated at USD 71 billion by 2030** for the industry, waste management, LULUCF, agriculture, transportation, urban development and energy sectors. This estimation was elaborated by sectorial working groups that developed cost-benefit analysis to each sector.
- ❑ Currently, there are no estimations of the costs of adaptation measures in Guatemala, however this is a priority for the current government in response to more frequent and more intense adverse effects of climate events in the country.

PANAMA

- ❑ Its NDC is mitigation only. As a result of an analysis of the mitigation potential and possible measures to reduce greenhouse gases for the implementation of policies in the energy and land use, land use change and forestry (LULUCF), **investment needs for 2 mitigation measures are estimated at USD 4.4 billion by 2050** (see Annex 2).
- ❑ Currently, Panama is in the process of reviewing and updating its first NDC, mainly focused in the review of its goals, the generation of a tool for monitoring progress on their implementation, and the development of a National Implementation Plan. This update has the overall objective of increasing the ambition of the NDC through new prioritized areas in transport and energy efficiency as well as the inclusion of policies and measures of adaptation with regards to water resources, human settlements, agriculture, coastal resources and human health.

PERU

- ❑ Its NDC has an adaptation and mitigation side. The adaptation dimension of the NDC has the aim to reduce vulnerability in **water, agriculture, forests, fisheries and aquaculture, and health** with concrete objectives and goals and cross-cutting areas of work that refer to **risk disaster management, resilient infrastructure, poverty and vulnerable populations, gender, and fostering private investment to climate adaptation.** On the other hand, the mitigation side of the NDC is looking for an unconditional **20% emissions reduction from BAU by 2030** and an **additional 10% of emissions reductions conditioned** to international financing and cooperation.
- ❑ An interministerial committee has been constituted with the participation of 13 Government Departments in order to achieve these commitments. This Committee has estimated the **implementation costs of 50% of its NDC mitigation measures** (31 out of 62 – see Annex 3) representing 32% of GHG emissions reductions **by 2030 in USD 27.9 billion.** In terms of **adaptation**, it has also been estimated that the costs of not adapting to climate change would be around **USD 15.3 billion by 2030** which could represent a **6.8% reduction of its GDP.**

⁹ The Decarbonization Investment Plan is expected to be finalized in October 2020. Currently the Government of Costa Rica is working with the financial support of IDB and the technical support of South Pole.

Annex 1. Costa Rica's estimated costs for the implementation of its NDC

Number	Measure	Total costs (USD million)
1.1	By 2030. Clean transportation. Modernization of public transportation, including an integrated system of public transportation	\$2,309.5
1.2	By 2030. Clean transportation. Electrifying public and private transportation.	\$223.8
1.3	By 2030. Clean transportation. Modernization and efficiency of freight transportation.	\$1,679.1
1.4	By 2030. Promotion of sustainable urban development. Sustainable mobility.	\$830
2.1	By 2030. Development and promotion of renewable energy. 100% of power supply generated by renewable sources.	\$935
2.2	By 2030. Development and promotion of renewable energy. Promotion of distributed generation.	\$29
2.3	By 2030. Decarbonization of power supply. Biofuels.	\$60.5
2.4	By 2030. Promotion of energy efficiency for residential and industrial consumption.	\$0.9
3.1	By 2030. Promotion of comprehensive solid waste management.	\$122
3.2	By 2030. Reduction of the carbon footprint and waste in construction cycles: use of climate-smart systems	\$1.1
4.1	By 2030. Low-carbon development for the agriculture sector. Identification, promotion and transfer of low-emissions production technologies	\$235
4.2	By 2026. Improve the adaptation capacities of agriculture producers	\$2.4
5.1	By 2030. Carbon sinks management (land use plans, reforestation, avoided deforestation), integration of the rural development agenda with REDD+. Shared territory for agriculture and forestry sectors.	\$18.8
5.2	By 2030. Consolidation of the National Protected Areas System.	\$16.2
5.3	By 2030. Consolidation of the Biological Corridors System.	\$8.6
5.4	By 2030. Increase of forest coverage up to 60%.	(Included in 5.1)
5.5	By 2030. Fostering the use of wood in the construction sector.	\$8.5
6.1	By 2030. Consolidation of water security	\$27.5
6.2	By 2030. Increase coverage, maintenance and sustainability of the sanitary and rain sewage systems up to a 90%	\$3,874
6.3	By 2030. Creation of methodologies for identification and correction of physical vulnerabilities of infrastructure and human settlements systems	\$2.1
7.1	By 2018. Establishment of a program of surveillance of health to monitor pathologies related to climate change adverse effects	\$7.5

8.1	By 2020. Regulatory plans for mitigation and adaptation actions by municipalities	\$3.4
9.1	By 2030. Consolidation of carbon pricing systems (taxes, markets, compensation schemes) that are coherent with the national goals	\$0.7
9.2	By 2030. Consolidation of the payment for ecosystem services program as well as for compensation schemes for results-payments and recognition of ecosystem services	\$64.6
10	By 2030. Consolidation of systems of information to improve measurements to quantify emissions by different sectors as well as the consolidation of systems of information to assess the vulnerability of territories, ecosystems, production systems, human settlement systems and improve adaptation management	\$2.4
11.1	By 2018. Development of the National Adaptation Plan (including biodiversity, water resources, agriculture, fisheries, tourism, infrastructure, health).	\$0.3
11.2	By 2026. Improve community-based adaptation	\$8.5
11.3	By 2030. Consolidation of ecosystem-based adaptation	\$0.6
TOTAL		\$10,471.9

Source: Government of Costa Rica

Annex 2. Panama's mitigation actions and estimated costs for the implementation of its NDC by 2050

Sector	Contribution	Measurements	Investment Projections (USD million)
Energy	Promotion of the use of renewable energy sources	By 2050, 30% of the installed capacity of the electricity matrix must come from renewable energy sources	\$ 2,232 million
Land Use, Land Use Change and Forestry	Reforestation of degraded areas	Unilateral Contribution Increase in Carbon absorption capacity by 10% with respect to the Reference Scenario to 2050 Supported Contribution Increase in carbon absorption capacity by 80% with respect to the Reference Scenario to 2050	\$ 2,225 million
TOTAL			\$ 4,457 million

Source: Government of Panama, Ministry of Environment – based on Panama's First NDC submission.

Annex 3. Peru's mitigation actions and estimated costs for the implementation of its NDC by 2030

Number	Sector	Mitigation Sector	Implementation costs (USD)	Emissions reduction potential by 2030 (MtCO ₂ eq)	Accumulated reduction (MtCO ₂ e) 2010-2030
1	ENERGY	Renewable energy	\$6,283,272	3.8	43.69
2	ENERGY	Power supply with renewable sources in areas not connected to the grid	\$160,687,489	0.008	0.095
3	ENERGY	Cogeneration		0.713	
4	ENERGY	Transformation of the lightning market in the residential sector	\$64,031,949	0.181	1.093
5	ENERGY	Replacement of high pressure sodium vapor (VSAP) lamps with LED lamps in the public lighting sector	\$200,754,551	1.104	5.279
6	ENERGY	Energy efficiency labeling	\$45,561,590	0.488	3.001
7	ENERGY	Energy Audits in the public sector	\$103,783,146	0.061	0.52
8	ENERGY	Replacement of low efficiency lamps with LED lamps in the public sector	\$1,676,216	0.002	0.012
9	ENERGY	Clean cooking	\$488,577,622	1.9	25.077
10	ENERGY	Energy efficiency in the Industrial Sector	\$7,277,497	0.1	0.383
11	ENERGY	Energy efficiency in the Commercial Sector	\$1,049,266	0.004	0.02
12	ENERGY	Distributed power generation		0.036	
13	ENERGY	Replacement of electric heaters with solar water heaters		0.5	2.893

14	ENERGY	Installation of fans and replacement of kilns (with downdraft kilns) in artisanal brick production		0.2	1.02
15	ENERGY	Installation of kilns with higher energy efficiency and fuel switching in industrial brick production		0.5	3.02
16	ENERGY	Use of waste derived fuels as a substitute for fossil fuels in clinker furnaces (co-processing)		0.2	0.651
17	ENERGY	Improvement of energy efficiency in cement production to reduce electricity consumption		0.1	0.096
18	ENERGY	Energy efficiency through comprehensive interventions in the manufacturing industrial sector		0.02	1.035
19	ENERGY	Promotion of sustainable construction in new buildings		0.01	0.075
20	ENERGY	Energy efficiency in sanitation services		0.01	0.051
21	ENERGY	Reduction of water leaks in sanitation services		0.02	0.15
22	ENERGY	Pressure control in drinking water services		0.02	0.15
23	ENERGY	Use of renewable energies for power generation in sanitation services systems		0.03	0.258
24	ENERGY	Separation of inorganic solid waste for material recovery in collection centers	\$20,021,376	0.01	0.056
25	ENERGY	Implementation of the complementary corridors of the Integrated Transport System of Lima	\$4,198,504,375	0.2	1.511
26	ENERGY	Extensions and current operation of Metropolitan system	\$5,704,605,113	0.1	1.53
27	ENERGY	Implementation of lines 1 and 2 of the Lima and Callao Metro	\$2,913,713,367	0.1	1.042
28	ENERGY	Promotion of Natural Gas for Vehicles (NGV) for light vehicles	\$2,835,866,524	0.2	2.249
29	ENERGY	Promotion of the use of cleaner fuels	\$4,137,154,131	0.5	8.654
30	ENERGY	Promotion of electric vehicles at national level	\$4,037,509	0.2	0.468

31	ENERGY	Promotion of Liquefied Natural Gas (LNG) for the freight transport	\$200,175,857	2.7	13.785
32	ENERGY	Efficient driving training for professional drivers	\$304,672,408	0.4	2.006
33	ENERGY	National Sustainable Urban Transportation Program		0.1	0.568
34	ENERGY	National scrapping and vehicle-renewal program	\$3,239,134,571	0.1	0.992
35	ENERGY	Energy efficiency labeling for light vehicles	\$1,902,768	2.2	11.3
36	ENERGY	Project "Construction of the Transandino Tunnel"	\$2,183,145,457	0.1	0.8
37	ENERGY	Improvement of the rail transport service on the Tacna-Arica section	\$249,412,098	0.004	0.023
38	ENERGY	Integral Rehabilitation of the Huancayo - Huancavelica Railway	\$220,598,529	0.01	0.063
39	INDUSTRY	Clinker replacement to decrease the clinker / cement ratio producing cement with alternative additives		1.0283	5.247
40	INDUSTRY	Replacement of refrigerants with alternative substances with lower global warming potential		0.89	2.77
41	AGRI	Management of livestock production systems in high Andean natural pastures		2.2	13.49
42	AGRI	Management of livestock production systems in cultivated mountain pastures	\$150,391,672	2.55	15.8
43	AGRI	Implementation of pasture management techniques through silvopastoral systems	\$383,713,552	1.18	7.22
44	AGRI	Switching from rice crops to permanent and related crops	\$10,637,721	0.05	0.3
45	AGRI	Intermittent drying system in rice cultivation to reduce GHG emissions		0.27	1.76
46	AGRI	Sustainable management of permanent crops in the Amazonian region to reduce GHG emissions		0.28	1.73
47	LULUCF	Sustainable Forest Management in Forest Concessions		8.33	52.22
48	LULUCF	Community Forest Management		1.33	5.61

49	LULUCF	Forest conservation mechanisms in native community lands		5.76	54.01
50	LULUCF	Ensuring the Future of Protected Natural Areas: Peruvian heritage		1.49	10.32
51	LULUCF	Allocation of rights in non-classified lands in the Amazonian region		1.49	10.32
52	LULUCF	Commercial Forest Plantations		10.49	58.72
53	LULUCF	Forest Plantations for protection and/or restoration purposes		2.15	10.12
54	LULUCF	Agroforestry systems		1.38	7.45
55	WASTE	New solid waste landfills with semi-aerobic technology	\$5,190,524	0.13	0.824
56	WASTE	Separation of organic solid waste for their use in composting plants	\$21,927,661	0.004	0.0163
57	WASTE	Solid waste landfills with centralized systems for biogas capturing/recovering and burning	\$6,485,242	0.173	1.103
58	WASTE	Use of biogas generated in solid waste landfills for energy recovery	\$95,290,565	0.281	1.576
59	WASTE	New Wastewater treatment plants to close gaps in sanitation sector		0.17	0.511
60	WASTE	Methane capture and burning in anaerobic lagoons		0.146	1.484
61	WASTE	Methane capture and burning in new anaerobic sludge reactors at Wastewater treatment plants		0.043	0.511
62	WASTE	Use of treated biosolids and wastewater		0.001	0.006

Source: Government of Peru

TOTAL \$ 27,966,263,622 58.75 396.73