



COP 29: results and perspectives for future

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CONTENT

List of abbreviations	2
Introduction, general features of the UNFCCC COP and specific features of COP 29	3
The financial goal of the Paris Agreement and its further development	5
Operationalization of market-based approaches to emission reduction	9
Non-market approaches to emission reduction	11
Problems of adaptation to climate change	12
Gender issues	13
Other decisions of the COP	14
Informal Events	15
Has the COP 29 lived up to expectations?	17
Prospects for the next years	18
ANNEXES	
“Gap” in global efforts on GHG emission reduction	19
“Gap” in efforts on adaptation to climate changes	21

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List of abbreviations

AC	Adaptation committee
AF	Adaptation fund (PA)
BASIC	Group of four countries: Brazil, China, India and South Africa
CAN	Climate action network
CAREC	Central Asia regional ecological center
COP	Conference of the Parties (in the given review used for meeting in Baku as a whole)
CP	Official meetings and decisions of COP as conference of all Parties of the FCCC
CMA	Official meetings and decisions of COP as meeting of Parties of the PA
CMP	Official meetings and decisions of COP as meeting of Parties of the KP
FAO	Food and agriculture organization
FCCC	UN Framework convention on climate change
FRLD	Fund for response on loss and damage
GCNMA	Glasgow committee on non-market approaches
GEF	Global environment facility
GCF	Green climate fund
GGA	Global goal on adaptation (PA goal on adaptation)
GHG	Greenhouse gases
GST	Global stocktake
ICAO	International civil aviation organization
IMO	International marine organization
IPCC	Intergovernmental Panel on Climate Change
JT WP	Just transition work program
KP	Kyoto protocol
LD	Loss and damage
LDC	Least developed countries
LMDC	Like-minded developing countries
LWPG	Lima work programme on gender
MDB	Multilateral development banks
MWP	Mitigation work program
NAP	National adaptation plan
NbS	Naturally based solution
NCQG	New collective quantified goal on climate finance (PA goal on finance)
NDC	Nationally determined contribution (PA)
NMA	Non market approach
NWP	Nairobi work program on adaptation
PA	Paris agreement
RM	Response measures
SBI	Subsidiary body in implementation
SBSTA	Subsidiary body on scientific and technological advice
SC	Supervisory committee_(Art. 6.4 PA)
SCF	Standing committee on finance
SIDS	Small island developing states
WEDO	Women's Environment and Development Organization
WIM	Warsaw international mechanism on loss and damage

Introduction, general features of the UNFCCC COP and specific features of COP 29

This review continues the author's long-standing tradition of preparing analytical papers before and after each COP (previous reviews were issued on [results of COP 28](#) and [before COP 29](#)). The review is based on [documents of the UN Framework Convention on Climate Change \(FCCC\)](#), [reviews of each day and final results of the COP from ENB bulletin](#), official and unofficial statements of countries, international organizations and companies, analytical works and expert views. It is designed for a wide range of stakeholders representing government agencies, business and youth, NGOs and the media, both participating in COP 29², and those who are just interested in international climate policy and the activities of countries under the FCCC and its Paris Agreement (PA). Below, the review is conducted by groups of countries, as a rule, developed and developing countries, the most vulnerable countries and the world community. In particular, environmental organizations united in the global [Climate Action Network \(CAN\)](#), and its branch for Eastern Europe, Caucasus and Central Asia ([in Russian](#) and [English](#)). Greater detail would make the review very cumbersome.

The annual 29th Conference of the Parties (COP 29) was held in Baku from 11 to 24 November 2024. According to the “good” tradition of the UNFCCC, it ended not as planned, on Friday, 22 November, but early in the morning on Sunday, 24 November. COP 29, to an even greater extent than previous COPs, was a financial and organizational meeting. Its dominant task was the financial goal of the PA – NCQG. Initially, the UNFCCC and its Kyoto Protocol (KP) were focused on reducing greenhouse gas emissions. However, after the conclusion of the PA in 2015, which brought adaptation measures and massive climate financing into international climate policy, the results of COPs, both official decisions and a wide range of agreements at the level of countries and organizations, are directly or indirectly related to financing of developing countries. At the same time, the context of COP 29 on greenhouse gas emissions was predictably negative. The chances of maintaining global warming at 1.5 C deg. or even 2 C are very slim. The world, represented by the largest countries that have set goals for achieving carbon neutrality in 2050-2070 and are slowly moving towards them, is moving along a 2.5-3 C trajectory. The [UNEP report](#) specially prepared for COP 29 talks about a “gap” between the COP goals and real actions on emissions (see the Annex below with a description of the situation).

According to the UNFCCC Secretariat, there were about 67,000 people at COP 29, including 33,000 country delegates, over 13,000 observers (of whom 1,880 were guests invited by Azerbaijan, what was very pleased for NGOs from developing countries), 3,500 media representatives, and over 14,000 technical support staff, including the Secretariat. Many country delegates and observers, especially business representatives, came for “a couple” of days to participate in events that were important to them. Thus average “load of meaningful people” was about 20,000 per day. COP was very well organized, especially by transportation, many volunteer assistants, large number of halls and meeting rooms, what made COP 29 as very pleased and spacious summit without long lines.

The work, as at previous COPs, was structured as follows. At the beginning, the World Leaders Climate Action Summit/High-Level Segment was held, attended by about 100 country leaders. At the same time, the CP, CMA, CMP, SBI and SBSTA formed [about 30 contact groups](#) on various items on their agendas, as well as about 10 groups for informal consultations. During the first week of the COP, the groups prepared options for decisions, which were considered at a higher, ministerial, level in the second week (High-Level Segment Part II). Then, in accordance with their mandates, SBI and SBSTA made decisions or forwarded proposals to the CMA, CMP

² In this review, COP 29 is understood in a broad sense to refer to the entire Baku Summit and not just the official meetings of Conference the Parties to the FCCC, referred below as CP 29.

and CP. At the final stage, decisions were made on PA and KP issues by the CMA and CMP, and on the UNFCCC as a whole by the CP.

The main feature of COP 29 was the dominant role of the development of new collective quantified goal on climate finance (NCQG), which is discussed in the next section. Objective 2 was the operationalization of market mechanisms for international cooperation in reducing GHG emissions (Articles 6.2 and 6.4 of the PA), see section 3 of the review below. As usual, the COP faced issues of work of its numerous bodies, both those considered annually and new ones, in particular on the FRLD fund (the agendas of the CP, CMA, SBSTA and SBI are described in detail in the [review issued before the COP](#)).

In the most general view, the "balance" looked like this. The Alliance of Small Island States, the Least Developed Countries (LDC), the group of Small Island Developing States (SIDS), the EU and developed countries as a whole traditionally advocated for accelerating and strengthening activities on "all fronts". At the same time, the position of the United States was often very specific. On the other "flank" of gradual developments and independent choice of actions were the Arab Group and the group of several developing countries - LMDC, led by China, India and Saudi Arabia. An intermediate position, as a rule, was occupied by the Group of African states, South Africa, Brazil and other Latin American countries. At the same time, [China and the BASIC group](#) as a whole had their own priorities, in particular, counteracting the introduction of trade barriers. Also traditionally for the FCCC, [China and the United States](#) made a joint statement in advance, demonstrating the unity of the largest economies on the climate issue.

None of the countries expressed doubts about the dominant anthropogenic impact on the climate on the scale of the 21st century, about the need to stabilize the situation at a relatively safe level. Most countries, in particular Russia, emphasized the key role of climate science, support for research and systematic observations, IPCC reports as a basis for decision-making. Also, the participants of the COP were unanimous in their opinion about the fundamental importance of transparency of all actions, including the allocation and expenditure of funds, risk analysis and measures to reduce them, especially actions under Article 6 of the PA (for more details, see the publications of CAREC³).

Numerous events and meetings in the pavilions of countries and organizations, as well as seminars of the FCCC secretariat and UN organizations were the main business of 80-90% of the participants. A wide range of issues were discussed there, from scientific and environmental problems to a critical assessment of the actions of countries, companies and financial institutions. They are a platform for strengthening cooperation, starting partnerships and joint projects, expressing opinions on the progress and documents of the FCCC. It is no coincidence that it is said that all COPs are held in three formats: official negotiations, meetings and statements by heads of state and other senior officials, and unofficial events. In COP 29 activities of host country NGOs and other national organizations should be underlined. They conducted large number of very useful, high represented and well organized events, in particular, under Caspian cooperation.

This year was unique for the Central Asian countries. Of the five countries, four presented their pavilions (three of them were organized with the technical support of CAREC). In the conference hall of the pavilion "Kyrgyzstan: Sustainable Development of Mountain Territories" alone, 33 events (side events) were held. They were attended by more than 800 delegates accredited in the negotiation zone COP 29 (blue zone), from different countries and organizations, about 276 leading experts spoke - representatives of government agencies, NGOs, private

³ For the three parts of Article 6 of the PA, CAREC prepared the memos "[Progress and Prospects of Negotiations on Articles 6.2, 6.4, 6.8](#)", which were prepared together with the "[Glossary on Articles 6 and 13 of the PA](#)" and the "[Guide to Transparency and Communication of Articles 6 and 13 of the PA](#)", since transparency is a prerequisite for the success of work under Article 6.

businesses and international organizations. Of the total number of speakers, 64% were women. In addition, more than 50 meetings with international partners were held in a very impressive traditional yurt and other negotiation rooms of the Kyrgyzstan pavilion⁴.

The financial goal of the Paris Agreement and its further development

Article 2 of the PA specifies three goals: limiting global warming (less than 2 C deg. and aiming for 1.5 C from the 19th century level), adaptation (adopted at COP 28, see the [review of the results of COP 28](#)) and climate financing for developing countries. It was also decided in Paris that the flow of funds from developed to developing countries by 2020 should amount to 100 billion dollars per year, which was achieved with a delay of two years (for the dynamics for 2013-2022, see the [OECD report](#)). This flow was called funds from the Global North to the Global South. Now it was necessary to take the next step, taking into account both the global situation as a whole and the needs of developing countries - to adopt NCQG.

In 2024, the UNFCCC Standing Committee on Finance (SCF) prepared the next biennial report, the [Sixth Biennial Assessment and Overview of Climate Finance Flows](#), with an overview of the situation in 2021–2022 (in 2026, the SCF will present the report for 2023–2024), which describes in detail the situation with climate finance in the world as a whole, including various financial instruments from grants to green bonds. It is clear that the count is in the trillions and that there is such money in the world. At the same time, the flow of funds mobilized by developed countries for climate financing of developing countries is many times smaller. The report of the representative analytical group [The Independent High Level Expert Group](#), which was released before COP 29, clearly shows that needs of developing countries are in trillions. Similar conclusions are in UNEP reports issued before COP 29 on the “gap” between needs and actions in [adaptation to climate change](#) and [reducing GHG emissions](#) (see below in Annexes).

At political level of NCQG, developed countries proposed a two-tier system, with a central tier formed from public and nationally mobilized funds surrounded by a large investment tier. Developing countries rejected the investment tier, citing inequality in investment, high cost of capital, inadequate credit ratings, and other problems that could not be addressed within FCCC.

Following discussions in 2024, it was clear that the delegations faced two main tasks: to arrive at the numerical parameters of the goal and to involve countries that are not included in Annex 1 (developed countries) and Annex 2 (the most developed countries) of the UNFCCC, but are de facto very strong (Chile, China, Saudi Arabia, Singapore, South Korea, the UAE, Uruguay, etc.). They are already making a significant contribution to the common cause of helping the weakest and most vulnerable states (this flow of funds is called South-South). The division of countries according to [the World Bank scale](#) is known, but its use in the UNFCCC has been repeatedly rejected. In 2023-2024, many studies on the categorization of countries were published, in particular, the detailed [ODI report](#), but the proposed schemes, as a rule, have no experience of practical use. At the same time, there is a special OECD committee on development assistance (DAC, [Development Assistance Committee](#)), which maintains a list of aid recipients (ODA, [List of Official Development Assistance](#)). Unlike the division of countries in the UNFCCC, which has been unchanged since the early 1990s, this list is updated. [Its examination](#) shows that there are 135 ODA recipient countries that are not included in Annex I of the UNFCCC. At the same time, 19 countries that are not included in Annex I do not receive ODA.

However, under the UNFCCC, only the most developed countries in Annex 2 are obliged to pay, while countries like Russia, which is in Annex 1 but not in 2, are voluntary donors. The

⁴ The author of the review expresses gratitude to Vladimir Grebnev (CAREC) for detailed data on the events, as well as for their excellent implementation.

UNFCCC was prepared in 1992 and is largely outdated, but all attempts to change the lists are rejected, primarily by developing countries. It was necessary to describe the new "donor base" without violating the basic principles of the UNFCCC, including the voluntary nature of financial actions by countries not included in Annex 1.

The problem of the "donor base" was solved relatively quickly by dividing the numerical goal into two parts: the total amount of climate financing in developing countries (all climate funds in the Global South) and a separate part of it - the amount coming from developed countries (the Global North - Global South flow). The idea is not new, in particular, it was proposed a year ago by the [Independent High-Level Expert Group on Climate Finance](#), and from billions it led to trillions, which was a fundamental point of the positions of developing countries. The time horizon of the target was set at 2035 (with consideration of interim results in 2030).

As a result, [item 7 of the decision on the financial goal](#) contains a "call" (the UNFCCC and PA mandate does not allow for legally binding) for "all actors" to work together and increase climate finance in developing countries from all public and private sources to 1.3 trillion per year. By "all actors" is meant governments, companies and even households in developing countries, including their international cooperation (South-South flows of funds) as well as funds coming from the Global North. [Item 9 of the decision](#) calls on developing countries to make voluntary contributions to South-South cooperation.

At the same time, [item 3 of the decision](#) repeats the estimates of the needs of developing countries as a whole from the [report of the Standing Committee on Finance](#) (about 5 trillion in the period up to 2030, or approximately 500 billion per year), as well as their adaptation needs from the [UNEP report](#) (up to 2030, approximately 200-400 billion per year).

Creation of a new *fiscal space* in developing countries using innovative instruments has caused considerable controversy. At informal events of the COP, many examples of "tricks" in calculating funds and the ambiguity of some instruments were given. As a result, [item 15 of the decision](#) refers to *such instruments as* "first-loss" instruments, guarantees, local currency financing in combination with "foreign exchange risk instruments" (all taking into account national circumstances). However, "debt-for-climate action swaps", green bonds, voluntary carbon markets and "equities" were removed from the text. The preposition was also changed: instead of *fiscal space for developing countries*, the final text refers to *space in these countries*. Of course, the text of paragraph 15 does not speak of a ban on these instruments, rather it notes the priority of "*such as*", which do not raise objections from developing countries (recall that this does not refer to the world as a whole, but only to the new *fiscal space in developing countries*).

In general, the decision speaks of a plurality of sources: public and private, bilateral and multilateral, including alternative sources, which allows for a very broad interpretation. No details are given, but it is emphasized that they should be significant for strong mitigation and adaptation actions, and transparent in implementation. Despite the fiscal nature of majority of new sources, they are also important for adaptation (see the report prepared for COP 29 on NCQG [The role of different sources for adaptation finance](#)). Note that various approaches are also being discussed in preparation of the [UN Framework Convention on International Tax Cooperation](#).

At the same time, for the US – the main initiator of investment decisions and new fiscal space – it was fundamentally important that the decision only referenced Article 9 of the PA⁵ as a

⁵ In Article 9 of the PA, the word "shall" is used in item 9.1 in relation to the allocation of financial resources by developed countries in general. However, items 9.3 and 9.4, where their actions to allocate funds are described in more detail, the word "should" is used. Further, "shall" is used in paragraphs that speak of the reporting of developed countries. This combination, in the opinion of the United States, allows us to consider that "shall" in the title paragraph of Article 9 is further specified in the form of reporting, and the allocation of funds itself is described by the

whole, but not Article 9.1, the word “should”, but not “shall”, which, according to them, would turn the political agreement into an economic one and would require ratification by the Senate – in fact, the US withdrawal from the PA. The decision uses references that are suitable for the US.

The second part of the goal ([item 8 of the decision](#)) caused heated debates that continued until the last moment. Developing countries insisted on a trillion, the position of the Group of 77 and China was united and tough - 1.3 trillion funds mobilized by developed countries for developing countries. Developed countries called for a realistic look at the situation and starting from 100 billion, unofficially "circulated" figures of 200-300.

Least Developed Countries (LDCs) and Small Island Developing States (SIDS) insisted on securing 220 and 39 billion per year for them, respectively. They were offered various text options (without figures) emphasizing their special needs, which was eventually included in the decision. They were also very unhappy with the lack of separate funding for “loss and damage” in the negotiating texts (situations when adaptation is practically impossible, direct assistance is needed to reduce damage, including resettlement of people, see the decision to create the FRLD fund in the [review on results of COP 28](#)). This controversial point was resolved to their disadvantage already at the initial stage of COP 29. “Loss and damage” was considered part of adaptation, based on the fact that, despite the presence of Art. 8 of the PA (on “loss and damage”), the financial Art. 9 of the PA clearly speaks of only two types of actions: to mitigate climate change and to adapt to it. The importance of funding various types of “loss and damage” (economic and non-economic, emergency situations and slowly developing events) is mentioned in the decision, but without numerical parameters.

In parallel with the discussion of the "figure" of funds from developed countries, other problems were gradually being solved: ratios of grants and soft loans, funds for low-carbon development and adaptation (for more details, see [review on the eve of COP 29](#)). They were solved mainly by replacement of figures by text descriptions and cutting off complex points that were not directly related to the two-component goal. References to moving away from fossil fuels and to 2050 as the time to achieve zero emissions (net zero) were removed from the text.

The requirement of many developing countries for 50% of non-debt instruments (for all but private funds) was replaced by language calling for an increase in grant resources. The decision also, without specifying numbers, talks about achieving a balance between funds allocated for mitigation and adaptation (including “loss and damage” in adaptation).

The requirement for a 20% share of funds for multilateral climate funds, including those created by the FCCC (GEF, GCF, FRLD, etc.), was replaced by “at least tripling” the flow of public funds to these funds by 2030 from 2022 levels. Currently, this is [only about 3%](#) of the total climate financing of developing countries, but the role of these funds is large, since they most closely follow the priorities of the most vulnerable states that need grants for adaptation.

Many experts said that it was impossible to reach a consensus on the figure of funds from developed countries. The figure of 250 billion was held for a long time, and in [the final decision](#) it became 300. The experts did not dare to remind that the FCCC has a practice of "forced consensus", when the chairman opens session, immediately speaks about the decision and immediately hits the gavel, despite the desire of the countries to speak, this has happened more than once in the history of the UNFCCC. And so it was done. After that, India, Bolivia, Nigeria, and Malawi, on behalf of 45 LDC countries, strongly protested, but their opinions will only be included in the final report. Of course, they understood that in the absence of consensus this would happen. LDC and SIDS had the opportunity to boycott, to leave the room in advance, which

word "should", which indicates a political, not economic obligation, for which a decision by the president of the country is sufficient.

would deprive the CMA of a quorum (remembering the sad experience of the recent COP 16 of the Convention on the Conservation of Biodiversity). But the countries decided not to undermine the activities of the FCCC by such demarche. Pakistan, who spoke next, said it was leaving Baku with a “heavy heart and mixed feelings.” Meanwhile, the EU’s subsequent speech spoke of a “new era of climate finance,” with more funds available, easier access, faster support for adaptation, a larger “voluntary contributor base,” and a growing role for multilateral development banks in mobilizing private finance. Perhaps, pragmatically, these views accurately summarize the achievements of the NCQG.

Now the decisions should be implemented. Regarding the "300 billion", it can be noted that the current 115 (for 2022) will become close to 180 by 2035 due to inflation. Developed countries intend to reach 300 primarily through innovative and private funds. At the same time, a number of estimates, in particular, the World Resources Institute, say that various new instruments, including taxes on air and sea transport, as well as on wealth and luxury goods, could in principle bring the amount to 300 billion.

The situation is less clear regarding “1.3 trillion”. The decision refers to the creation of a “Roadmap 1.3 T Baku – Belem” (a city in Brazil where COP 30 is scheduled to take place in November 2025). Its goal is described as increasing climate finance for developing countries to support low-carbon and climate-resilient development pathways, including the implementation of NDCs and national adaptation plans, in the form of grants, concessional and non-debt instruments, and measures to create fiscal space. A corresponding report should be prepared under the leadership of the chairs of COP 29 and COP 30, which will be presented in Belem.

There is a lot of relevant information, a [comprehensive SCF report](#) was presented in Baku, which analyzes the situation with climate financing in the world as a whole. It estimates all climate financing in 2021-2022 at 1.3 trillion/year (excluding the green bond market, which accounts for 2.2 trillion from the total bond volume of 30 trillion). This is 63% more than in the previous two years, with the transport sector showing the greatest growth, followed by energy and buildings/infrastructure.

Another basic source of information can be the report of the [Independent High-Level Expert Group on Climate Finance](#) with a detailed examination of various financial flows in developing countries related to climate issues, "all actors" down to households. It considers a double target similar to NCQG, where instead of 1 trillion/year (1.3 trillion minus 300 billion), 1.4 trillion is "collected" from domestic sources of developing countries, and the analysis is carried out without taking into account China. This 1.4 trillion is made up of 800-900 billion of public and 550-630 billion of private funds (they also include expenditures at the household level). At the same time, currently the public funds of the South (excluding China) are approximately 3 times less, and private ones are 5-7 times less. At the same time, instead of 300 billion, 1 trillion comes from developed countries, which in total gives 2.4 trillion. The allocation of 2.4 trillion implies 1.6 trillion for green energy, 0.25 trillion for adaptation, another 0.25 trillion for “loss and damage,” and 0.3 trillion for natural “capital” and sustainable agriculture. The analysis is given for 2030, but it can probably be applied to 2035 as well. Of course, directly copying the proportions is unlikely to be applicable to NCQG, but the presence of relevant information in the report will probably help construct the allocation of 1 trillion NCQG by sources and sectors of the economy.

We also note the [report by the World Resource Institute](#), which analyzes in detail the options and opportunities for countries in financing the process of achieving their NDC.

At the end of the COP, it was said that many research centers will now urgently begin work on analyzing the options of the 1.3T Roadmap. Among them, it will probably be the [Global Solidarity Levies Task Force](#), announced at COP 28, based at the European Climate Foundation.

For now, it is expected to include about 15 countries, and then it will expand. The official presentation of the group is scheduled for COP 30.

Along with the NCQG of the PA, COP traditionally considered issues of long-term financing under the UNFCCC as a whole. However, in this case, being in the “shadow” of the NCQG, they were reduced to reviewing reports and resolving technical issues. The CP [decision on long-term financing](#) is very brief. It takes note of the activities under the Needs-Based Finance project (it presented an [extensive report with an analysis of the needs](#) of more than 100 developing countries, grouped into 12 regions and country groups, including an analysis of priorities and specific projects and programs). It also took note of the [SCF report](#) on achieving the \$100 billion target and further progress. It was the subject of heated discussions, with developed countries talking about the achieved result, while developing countries questioned it.

In addition, the CP and the CMA adopted technical and organizational decisions on the ongoing work of the funds; GCF, GEF, FRLD and AF. The CMA also adopted a [decision welcoming the dialogue held on the scope of the financial objective](#) of the PA (paragraph 2.1c of the PA) and its complementarity with financial Article 9 of the PA. It was decided to continue this work in 2025 in the form of working meetings.

At the same time, no decisions were made on periodic reviews of the operating procedures and functions of a number of the UNFCCC bodies: Financial Mechanism (the system of operation of funds), its connection with Technological Mechanism (the system of assistance to technology transfer), SCF and Adaptation Committee, what reflects the different views of developed and some developing countries on the procedural aspects of their work (at the level of CP or CMA), potentially affecting their role in financial matters. Review at the CMA means, in general, greater “equality” of developed and developing countries, at least in reporting and transparency.

The NCQG decision is the core of the [Baku Climate Unity Pact](#) (it also included [adaptation](#) and [mitigation decisions](#) discussed below, which are not comparable with NCQG by importance). It was decided that progress on NCQG would be periodically reviewed as part of GST, and that CMA would conduct special assessment of the results over the past years in 2030. An assessment of the decision and, accordingly, the results of the COP as a whole is given below in the section “Has the COP 29 lived up to expectations?”, and the outlook is in the final section of the review.

Operationalization of market-based approaches to emission reduction

In Baku, the decision-making process at the CMA level on market-based approaches to GHG emission reduction was completed. This refers to transactions with carbon units between countries (Article 6.2 of the PA) and between legal entities implementing projects and acquiring units (Article 6.4 of the PA). The first round of decision-making was in 2021, the second in 2022, there were a few issues left, but they could not be resolved at COP 28 (for more details, see the CAREC materials⁶). At the same time, agreement was largely achieved by refusing to accept complex cases. In June 2024, it was decided that “avoiding emissions” cannot generate carbon units (until the next revision of the rules in 2028). For example, units cannot be issued if planned deforestation is cancelled (avoided). However, there was no doubt that units could be issued as a result of measures to increase CO₂ sequestration on managed lands/forests. For more details, see the [review prepared by COP 29](#).

The COP 29 [decision on Article 6.2](#) closes the remaining issues, emphasizing the voluntary nature of countries' participation in the international transfer of units. It sets out the process for

⁶ For three parts of Article 6 of the PA, before COP 29, CAREC memos were prepared: [“Progress and Prospects of Negotiations on Articles 6.2, 6.4, 6.8”](#).

countries to authorize carbon units (timeframes, content and format of the document, changes in authorization) intended either for transfer, or for fulfilling their NDC, or for other purposes. It describes the specifics of the "first transfer" of units (meaning that they can then be circulated on the market), including reporting and the cancellation of a portion of the units to ensure the overall net effect of reducing emissions from participation in this mechanism. The document pays great attention to reporting and its uniformity, and the annex to it contains requirements, including a detailed analysis of uncertainties, baselines and risks, up to cases of withdrawal of units.

Particular attention is paid to the verification of reporting, identification and ranking of inconsistencies. Automatic consistency checks and expert reviews will be organized. If the identified inconsistencies affect the emission balance to achieve the NDC, countries should not use units associated with the inconsistencies in order to avoid the risk of double counting. Much attention is paid to work of international registry on Article 6.2, its links with national registries. Many weak countries spoke about impossibility of organizing and maintaining registries, as a result it was decided that, at the request of the country, the national registry can be maintained with help and on site of Secretariat. The Secretariat should also help countries in certifying the results of mitigation measures for the release of units and the operation of the registry.

Under Article 6.4, there is a Supervisory Body (SC) called upon to develop documents and, if mandated by the CMA, to adopt them. This made the task much easier for decision making in Baku. In many cases, it was enough to agree with the SC. This happened on the first day of the COP, when, in order to create a positive mood, the [CMA adopted a decision welcoming SC documents](#) on the [methodologies standard](#) (principles, baselines, leakages, permanence, etc.) and the [standard of requirements for activities including removals](#) (monitoring, reporting, risks, leakages, buffer account, reversals and remediation, social and environmental aspects, etc.). Then, the [CMA decision adopted at the end](#) of the COP indicates the use of these standards, as well as the SC [standard on sustainable development](#) (environmental and social safeguards, impacts on sustainable development, validation and verification, etc.). The SC is given a mandate to continue work on a wide range of issues, including changing the above standards, as well as considering the baselines of the KP clean development mechanism projects if their units are intended to be converted into Article 6.4 units (a [special section of the decision](#) is devoted to this process).

The [decision](#) then addresses the authorization of units and operation of the registry, synchronized with activities under Article 6.2. The SC is empowered to make decisions on the temporary parameters of authorization and to report them to the CMA in November 2025. It is noted that units of Article 6.4 cannot be used for the NDC of the issuing country. The SC should also make decisions in complex cases, in particular, when adjustments are introduced for different NDC formats.

In general, decisions on market mechanisms make it possible to deploy the work of registries and begin procedures leading to the transfer of carbon units in 2025. Switzerland, Norway, Singapore, the UAE, New Zealand and Japan have previously announced their intention to buy units under Article 6.2, but in very limited quantities and, as a rule, with an indication of the presence of already designated developing country sellers.

Under Article 6.4, a global market is expected to form, where units, with possible but few exceptions, cannot be used to fulfill the obligations of the purchasing company in their country. In fact, we are talking about another voluntary market, but more reliable and prestigious due to belonging to the PA and strict control of the SC. At the same time, the basic conditions for high prestige, which creates demand, are maximum transparency, low risks of "leakage" (increase in emissions beyond the project boundaries), permanence of results, extremely conservative baselines and significant associated benefits, including adaptation, social aspects, conservation of

biodiversity, etc. (for more details, see CAREC "[Guide to transparency and communication of Articles 6 and 13 PA](#)" and "[Glossary for Articles 6 and 13 PA](#)").

In this situation, opinions were expressed at the COP that the global market, taking into account 6.2 and 6.4, will grow by 2-4 times by 2030 and reach 1-2 billion CO₂-eq/year. It was said that this is not a small amount, but much less than the internal markets of China and the EU, which together already cover about 25% of all global anthropogenic emissions.

Non-market approaches to emission reduction

The third part of Article 6 (Article 6.8 of the PA) is devoted to non-market approaches in international cooperation on mitigation (Non Market Approach, NMA). This refers to any actions without transfer of carbon units: certification and labeling systems, standards and technical requirements, all kinds of regulatory measures and payments. Potentially, this is a very important area of activity. In particular, the EU border payment (Carbon Boundary Adjustment Mechanism, CBAM) can be attributed to Article 6.8, as well as the issue of trade barriers and fair supply chains, which is a priority for China and the [position of the BASIC group](#) as a whole.

The progress of negotiations on Article 6.8 prior to COP 29 was described in detail in the [CAREC background material on Article 6.8](#). In 2021, in Glasgow ([Decision 4/CMA.3](#)), a special Glasgow Committee on Non-Market Approaches (GCNMA) was established and a work program for 2023–2026 was outlined, which includes outlining a range of possible activities, creating a web platform for information exchange, building the capacity of developing countries, etc. In 2022, the work was continued in [Decision 6/CMA.4](#). At COP 28, the committee's report was considered and a [decision was made on the Work Program on NMA](#), but further discussions boiled down to what should be considered NMA.

The EU proposed a “carbon price” and “nature-based solutions”, which were not supported by many developing countries. Sustainable development measures, mobilization of finance for local adaptation measures, biodiversity conservation, sustainable forest management, etc. were mentioned in discussions. At the same time, the work of civil aviation and maritime transport organizations (ICAO and IMO) was rejected as an example of activity under 6.8, since it is related to carbon units and is mandatory, which contradicts voluntary principles of the UNFCCC. Some developing countries fear that Art. 6.8 will force them to introduce certain NMAs in the future, in particular, carbon taxes. There can be no talk of imposing NMAs on countries, this is a national matter, but recommendations can be done, and in turn, will be taken into account by financial institutions. Therefore, at COP 29, countries continued to remain at the stage of collecting information and building cooperation for those who wanted to be pioneers of joint actions.

The [CMA decision on Article 6.8](#) refers to the work of GCNMA and the implementation of the work programme for 2023–2026, which is scheduled to be reviewed at COP 30. A [web platform has been created](#) for countries to enter existing, planned or desired non-market approaches, but they have not yet started filling them out. There is an information section, which, in particular, contains the [NMA submission format](#) and a [guide to filling out web forms](#) for national NMAs. Countries are quickly appointing their NMA focal points; there are already about 80 of them. The platform also collects proposals from organizations offering assistance in the development and implementation of approaches; the [first 10 proposals are already there](#). Thematic expert groups are being created to consider certain non-market approaches. Countries and all interested parties are invited to submit their views and proposals on the problems of the NMA platform and ways to improve its work by 31 March 2025

Problems of adaptation to climate change

The adaptation part of the "Baku Climate Unity Pact" is devoted to increasing the effectiveness of actions in developing countries in implementing the [global adaptation goal](#) (GGA) adopted at COP 28. The decision takes the first step towards transforming adaptation activities, which require indicators. However, their criteria must first be adopted, since a "free" set of indicators leads to an ineffective list of hundreds of items that is difficult to quantitatively analyze (in Baku it was decided that there will be no more than 100 indicators).

The [CMA decision on the GGA](#) added new criteria to the previously developed ones⁷ (relevance, increasing resilience to climate change, applicability and simplicity, clarity of methodologies, reflection of national and local characteristics, use of traditional knowledge, social aspects, use of the best scientific data). These are measurability, the possibility of transparent monitoring, availability of data and baselines, focus on results and their consequences. At the same time, as previously noted, the indicators cannot be used to compare the activities of countries; they are intended to make projects more effective and sustainable. The environmental community generally welcomes the decision, but notes its incompleteness, in particular, the lack of financial parameters. However, the situation with them is not simple, especially when it comes to the adaptation of people's lives and their health. The full list of indicators is scheduled to be adopted at COP 30.

These actions reflect the problem with adaptation projects in developing countries. Before COP 29, the [UNEP Adaptation Gap Report](#) was released, which analyzed the results of 168 projects implemented by UN funds with a total funding of about \$6 trillion. The results are disappointing: only 60% can be considered sustainable and only 4% were rated highly, while another 80% were satisfactory or conditionally satisfactory (see Annex below). At COP 29, it was repeatedly emphasized that progress is impossible without a full assessment of the effectiveness and long-term sustainability of the results, without a detailed risk assessment, including the magnitude and probability of negative events, cases of overlapping risks, and the possibilities for reducing risks through preventive or prompt actions. Without a detailed study of risks, it is impossible to achieve good and long-term results from used funds, and without them, it is difficult to count on a radical increase in funding.

Not surprisingly, there were problems with the decision on national adaptation plans (NAPs). Disagreements concerned the indication of the obligations of developed countries to provide funds, the role of the private sector in financing adaptation, and the language of strengthening adaptation measures. In the end, no decision was made, and work will continue at the UNFCCC session in June, based on the [working version of the SBI decision text](#).

In this context, it is important to note that in Baku Secretariat presented a [Technical report on transformation of adaptation](#). It provides definitions of terms and fundamental approaches to adaptation and its transformation. It provides a comprehensive analysis of current, expected and potential risks, limits and alternatives to adaptation. It provides examples of risk assessment metrics and identifies likely risk trends for the period up to 2030. It considers global risks (health, infrastructure, food, urban areas, human migration, nature-based solutions, etc.) that can be applied to a particular country. It also provides tentative regional assessments at the continental level. The report was barely discussed due to the fact that it was released shortly before the opening of the COP. The decision on the GGA took it into account with instructions to prepare an easy-to-read summary. The report itself will be considered in June at the session of the Subsidiary Bodies (SB62).

⁷ See list of criteria in item 79 of SBI and SBSTA decision ([Report of SBI on SB60](#) results in June 2024)

It should be noted that the agenda item of the CMA, dedicated to doubling the financing of adaptation measures in developing countries by developed countries (by 2025 from the 2019 level, from about 20 to 40 billion per year), was not actually discussed. The [decision](#) on it only takes into account the efforts made and the [report compiled by the OECD](#), according to which the level of 32.4 billion was reached in 2022, which indicates good dynamics. The majority (18 billion) came through multilateral banks and funds, about 10 billion through bilateral cooperation channels, of which about 17 billion were loans and 11 billion were grants. Another 3.5 billion were private funds. The LDC part is accounted as more than 11 billion. In informal discussions, the loans were the most criticized, many of which can hardly be called concessional.

Finalizing results of the COP, it can be concluded that in adaptation the UNFCCC is moving in right direction, increasing the volume and quality of adaptation measures in developing countries. There are many problems, they slow down progress, but they are being resolved, although much slowly than it is possible and then it is needed for the most vulnerable countries.

Gender issues

Gender issues have always been in the UNFCCC's sphere of activity; in 2014, at COP 25 in Lima, a long-term work programme on gender issues ([Lima work programme on gender, LWPG](#)) was adopted. At the same time, it was planned to extend it and develop a plan for the future just at COP 29. A [synthesis report](#) of the secretariat aimed at extending the LWPG was presented and taken into account. The UNFCCC has a special gender group of observer organizations, its status is similar to that of environmental, business, etc. The Women's Environment and Development Organization (WEDO) has established [fund](#) that provides women with support for participation in UNFCCC events.

Discussions covered both the language used for gender equality, human rights and resource allocation, as well as timing of the extension of the programme and action plan. Another topic of intense discussion was coordination with the Conventions on Biodiversity Conservation and Land Degradation and Desertification. Discussions on the wording for the appointment of Secretariat officials continued until the final meeting of the CP on the morning of 24 November. The final words of item 23 had to be read out orally at the time of adoption of the document, since the written text's reference to *increasing efficiency* of work (as a result of the above-mentioned gender-equal approach to the work of the UNFCCC Secretariat) did not suit many countries and was replaced by a reference to *not reducing efficiency*.

As a result, the [CP decision](#) extends the programme for 10 years, and the plan is developed for 5 years. The plan is to be adopted by CP 30. In June 2025, at the session in Bonn, the SBI is to prepare a draft CP decision, where a special technical workshop on this issue will also be held. The implementation of the work programme is to be reviewed at the SBI meetings in June and November 2029. According to the decision, secretariat is to carry out extensive work aimed at gender equality in various UNFCCC bodies, provide assistance to country representatives appointed as contact persons on gender issues of climate change ([National Gender and Climate Change Focal Points](#)), and pay special attention to relevant capacity building. The importance of taking into account gender issues was also reflected in the documents on the work of the [Adaptation Fund](#) and the [Standing Committee on Finance](#).

The importance of achieving a balance of regional and gender representation in the various bodies and expert groups of the UNFCCC was repeatedly emphasized at the COP. The disproportionately high harm from climate change on women, children and the rural poor was noted at many informal events, see in particular the recent [FAO report](#) (The Unjust Climate). It was also noted that more than 20 developing countries already have [National Gender and Climate](#)

[Change Plans](#), which, among other things, are intended to be an effective means of increasing climate financing.

In 2025, all countries should submit updated NDCs. Their gender parts are under special attention. WEDO has prepared [special guide](#) on gender issues in NDCs, which highlights the gender needs of all parts of the NDC, and provides sources of information for promoting gender issues and [preparing for the upcoming COPs](#). At the same time, WEDO has been organizing “schools” for women for over 10 years, in particular, to conduct various climate negotiations.

Other decisions of the COP

The third part of the Baku Pact is the [decision on the mitigation work program](#). The program was created in 2021 and involves holding global Dialogues twice a year to promote ambitious emission goals of countries, as well as investment-oriented events. In the first week of COP 29, countries did not agree on the text prepared by the co-chairs of the contact group, which contained many numerical indicators. In particular, on energy storage, modernization of power grids, reduction of global methane emissions by 30% in 2020-2030, ending deforestation by 2030, etc. India, China, Arab, African and a number of other countries spoke out against it, insisting that the mandate of the program does not allow considering such texts, that it is dedicated to organizing events, and the choice of solutions is the prerogative of countries. At the SB level, it was proposed to abandon the decision, but the CMA did not agree with this.

In the result, on the second week, [decision](#) was prepared and adopted outlining the actions of the programme, in particular on the discussion of the problems of cities and urban areas. By 1 February, countries and other stakeholders are invited to submit proposals for topics to be discussed at the global Dialogues in 2025, as well as their views on opportunities, best practices and solutions. By 1 May, they are invited to submit proposals for a platform designed to facilitate the implementation of mitigation measures through cooperation at all levels. All this is expected to be discussed in June at the 62nd session of the Subsidiary Bodies (SB62).

While there was at least agreement on the process under the mitigation work programme, this was not possible under the just transition work programme (JT WP, see [review of COP 28 results](#) for details). Countries did not reach consensus on the scope of JT programme and the preparation of the terms of reference for the Just Transition Guide. LMDC and a number of other countries objected to recognizing the socio-economic opportunities of moving away from fossil fuels. They also emphasized the unacceptability of unilateral trade measures and barriers. As a result, no text was agreed at the SB level for transfer to the CMA. There is no decision, discussions will continue at SB62 and then at COP 30.

No decisions were also reached on any aspect of the global stocktake (GST). A briefing note on procedural and logistical issues for the future of the GST has been prepared and is scheduled for discussion at SB62 and then at COP 30, but no decisions could be reached at COP 29. In particular, there was no agreement on the role of the IPCC. Developed and many other countries consider the IPCC to be the primary source of information, but LMDC and Arab countries did not agree.

When discussing how to conduct the Dialogue on implementation of GST 1 results ([held at COP 28](#)) LMDC, Arab and African countries believed that the dialogue should primarily address funding as Dialogue is included in the financial section ([GST 1 Decision](#), item 97). They were not in agreement with other countries, who were in favor of addressing all topics in the context of funding. These countries opposed draft CMA decision at the final meeting, which was not adopted. Discussions will continue at SB62 and then at COP 30.

Countries also disagreed on how to report on the use of GST results for the preparation of NDCs, what was the subject of consultations at the CMA level (annual dialogue under item 187 of [GST 1 decision](#)), whether to limit it to organizational aspects or to address substantive issues.

No decision was taken on the CMA agenda item on NDC Guidelines. Many views were expressed, but the set of materials was considered incomplete by some countries, and the discussion will continue at COP 31 in 2026.

At COP 29, the operationalization of the fund's work on "loss and damage" was completed, and issues of interaction with the World Bank were resolved, on whose platform FRLD will operate for another three years, and then its headquarter will be in the Philippines. There are also decisions on related issues of work on "loss and damage", in particular on WIM.

Consultations were held on the issue of trade barriers proposed by China. Discussion of the topic will continue at SB62 at the round table "Nexus trade and climate change".

Many [decisions were made on the current work](#) of the UNFCCC, primarily on the issues discussed annually at the COP:

- on reporting by developed and developing countries;
- on the work of various bodies of the UNFCCC and PA, as well as funds servicing the convention (for more details on decisions of a financial nature that were adopted and not adopted, see above at the end of the section on the financial objective of the PA);
- on Least Developed Countries;
- on forum discussing "response measures" (how low-carbon development of some countries affects others);
- on technology transfer;
- on research and systematic observations;
- on work program on agriculture and food security (organization of seminars, preparation of reports and operation of an Internet portal);
- on education and awareness (according to Art. 6 of the UNFCCC and Art. 12 of PA);
- on platform for local communities and indigenous peoples;
- on number of technical issues of the KP and its clean development mechanism;
- on capacity building in developing countries;
- on number of other issues, including administrative and financial aspects of the work of the secretariat and bodies of the UNFCCC.

At COP 29, no Overall decision was made, which usually reflects general issues and sums up the negotiations as a whole. Its absence is typical for COPs where there is one dominant topic (at COP 29 NCQG, at COP 28 GST). Therefore, there was no document where it would be possible to include the transition away from fossil fuels, the intention to triple the capacity of renewable energy sources and double the energy efficiency improvement, reflect the issues of mountains and oceans, the problem of trade barriers, etc. All these topics, of course, have not been forgotten, their discussion will continue at the next COPs.

Informal events

As at previous COPs, the events featured announcements of initiatives from leading business and the financial sector. [Business and financial leaders, including investors with combined assets of \\$10 trillion](#), announced that they would join forces for the first time to bring private capital to climate markets. The [World Cement and Concrete Association](#) reaffirmed its goals—the industry aims to accelerate the transition to "green" cement, reducing emissions by 25% by 2030 and fully decarbonizing by 2050. A sectoral approach is essential, as big business is

willing to bear an increasing climate “burden” only if it is the same for all global producers of similar products and does not distort competition.

The venue of the COP has led to increased attention to the water issue. UNEP and Azerbaijan prepared the [COP 29 Declaration on Water for Climate Action](#), the [ceremonial signing of which took place on November 21](#), and about 50 countries and organizations expressed their intention to participate in its implementation. It is assumed that this initiative will organically integrate into all [UNEP activities on water issues](#). It was also not surprising that attention was paid to the problems of the Caspian Sea. The Caspian Dialogue took place at the COP venue, an agreement was signed between four countries (Azerbaijan, Kazakhstan, Russia and Turkmenistan) on joint actions, experts from the countries exchanged information and agreed on cooperation.

The Asian Development Bank has announced a \$3.5 billion commitment for a new program to combat the effects of glacier melt. As part of this initiative, the bank will conduct glacier risk assessments in Azerbaijan, Kyrgyzstan, Tajikistan, and Uzbekistan through the GCF.

In preparation for the COP, the international initiative [Climate and Clean Air Coalition](#), known for its efforts to reduce emissions of short-lived (other than CO₂) climate-active substances, primarily methane, received “local” development. It now includes 91 countries. Azerbaijan, Uzbekistan, and Mongolia joined in 2024, while Kazakhstan and Kyrgyzstan did so in 2023 (Russia has been a participant in the program since 2014). Note that methane emissions from Russia’s terrestrial ecosystems largely “compensate” for their absorption of anthropogenic CO₂, which does not allow us to say that the country absorbs more than the emissions of CO₂ and other GHGs in its economic sectors (see [the study](#) of the Institute of Global Climate and Ecology of the Russian Academy of Sciences and Roshydromet).

The methane problem is that, on the one hand, its contribution to anthropogenic GHG emissions is significant (up to 20%), but, on the other hand, emissions are estimated very uncertainly (for details, see [IPCC report, 2021, Volume 1, Chapter 2](#)). Since 1975, the concentration of methane in the atmosphere has increased from 1550 to 1900 ppb, or by about 20%. Analysis of the isotopic composition of carbon atoms in atmospheric methane and other methods indicate that approximately 1/3 of emissions come from coal, gas and oil operations. Also, 1/3 comes from livestock farming, mainly high-yielding dairy cattle, and another 1/3 comes from waste and rice fields. Methane, unlike CO₂, enters into chemical reactions in the atmosphere, the average “lifetime” of a molecule is about 12 years. Therefore, another uncertainty arises when converting the emissions of a ton of methane into CO₂-eq. (global warming potential). If we take the 100-year time horizon of the greenhouse effect enhancement used by the UNFCCC, then the coefficient is 30±10, if 500 years, then approximately 4, and if 20 years, 80±30. This is often associated with the “disagreements” that arise in the media, when different time horizons are taken and news comes out that both overstate and understate the effect for the 21st century.

In 2024, UNEP published [special report on methane](#), which examines the initiative to reduce emissions in the oil and gas sector. It is emphasized that methane leaks into the atmosphere require careful monitoring, including using satellites. At the beginning of the initiative in 2020, about 60 companies participated, and now their number has reached 140. The share of European participants reached 80% of all regional production, in North America and the Middle East the shares are 40%, in the Asia-Pacific region 30%, and in Central Asia only 20%, which makes it a priority for rapid growth in participation. The second part of the report is devoted to methane emissions in the steel production supply chain. It is shown that the share of methane reaches 1/3 of the total carbon footprint of steel. The International Energy Agency has prepared the [Global Methane Tracker 2024](#), a database of emissions in the oil, gas and coal sectors of various countries. At the same time, many organizations, including [Carbon Credits](#), are particularly

emphasizing the importance of methane activities in the updated 2035 NDCs that countries are due to submit in 2025.

There was a lot of criticism at unofficial events. The unacceptability of credit conditions and the small number of grants for local communities were pointed out. The imposition of “paper” (soft) parts of projects by donors, expressed in holding conferences and preparing reports by expensive foreign experts, which led to the “return” of up to 50% of funds to developed countries, was criticized. NGOs and young people actively insisted on stronger climate actions, organized spectacular public events, which always attracted media.

Overall, COP 29, like previous conferences, successfully played the role of a catalyst for decision-making and signing agreements. This applies even to internal initiatives: in particular, it was at the COP site that a very important agreement on the preservation of Lake Balkhash was signed between the government of Kazakhstan and a Kazakh mining company. There is no doubt that without the COP it would have taken place, but probably later, while the lake requires immediate actions.

Has the COP 29 lived up to expectations?

Recalling the expectations from COP 29⁸, it could be concluded that it has fulfilled the minimum program. There is a two-component financial goal for 2035 (300 billion and 1.3 trillion per year). However, the second figure still needs to be clarified within the framework of the Roadmap "Baku - Belem 1.3T", and many people estimate the first one completely negatively, especially LDC and the environmental community, in particular, CAN. They are dissatisfied with the size of the goal (especially since it will be largely "eaten up" by inflation), and its structure, where there is no separate window for "losses and damage", no numerical expression of the balance between adaptation and mitigation, no parameters for the growth of grant or "no-debt" funds, no separate amount for LDC. They talk about the victory of the Global North over the Global South. However, it is added that the South only lost this round, the trend is in its favor.

It is necessary to underline that any estimation of the COP is just estimation of its' results from global or national points of view, while estimation of COP Presidency and host country is another matter. Presidency has achieved the main global result – NCQG that required a lot of time, diplomacy and patience. Local NGO did as much as possible for useful events and involvement of civil society in solution of climate problems. Host country created quite comfortable conditions and very friendly atmosphere. Therefore, work of hosts can be estimated as very good or at least as good as possible in the given situation.

After COP 29, practical work will begin to launch market mechanisms on Art. 6.2 and 6.4 of the PA. At the same time, there are concerns that too wide mandate has been given to the SC, that its decisions could make transactions on 6.2 insufficiently transparent (poor transparency of 6.4 units influenced on 6.2), and transactions with removal units on 6.4 too risky. If this happens, it will undermine the PA market's claims to "rigor and reliability" and lead to its stagnation.

Combination of three different-size documents into the "Baku Climate Unity Pact" was a bit of surprise. The intention to designate the unity of finance, adaptation and mitigation is understandable. However, the decision on mitigation only symbolically denotes the countries' adherence to this problem, the agreement is to discuss it, but without any parameters or criteria. The decision on adaptation is quite positive, but it is only a small step towards meaningful assessment and transformation of activities (moreover criteria for constructing adaptation indicators have been agreed upon without financial parameters).

⁸ See reviews prepared by the author before COP 29 (on the CAREC website in [Russian](#) and [English](#))

"Bridges" to COP 30 are weak, and only on finance, while there are none at all on a just transition, on global stocktaking and on strengthening NDC. The "own path for everyone" position prevailed, promoted primarily by leading developing countries (LMDC) and Arab states. It was even rumor that this is the other side of the "coin" of adopting a weak financial goal. Nature-based solutions and biodiversity were discussed a lot, but only on informal events. NGOs also criticize weak solution on gender (lack of milestones for action plan, which has to be adopted at COP 30).

At the same time, the summit has played its traditional role as a catalyst for action at the level of countries, companies and organizations, which concluded a lot of agreements. Companies and foundations, various organizations and NGOs demonstrated progress in low-carbon development and adaptation to climate change. According to most participants of the COP, even modestly estimated global results of the meeting will contribute to the development of green technologies and more effective adaptation, not sharply, but inexorably.

Prospects for the next years

The next COP 30 is full of questions. Brazil has worked hard to ensure that NCQG is adopted at COP 29 and does not interfere with their priorities for 2025. In Baku, at informal events, "bioeconomics for mitigation and adaptation" was repeatedly mentioned, and the enormous value of global ecosystem services of Amazon area was pointed out. It was also said that financing of "nature" should not include transfer of carbon units, that innovative approaches and a wide range of sources of funds should be involved. According to [IPCC forecasts](#), Amazonia will face very negative climate changes, primarily an increase in the number of dry and very dry years (of course, not in absolute, but in relative precipitation values). However, how to act and how to attract funds for this is still to be understood. At the same time, Brazilian delegation said at the meetings that we should not expect purely "natural" conference; a wide range of issues will be addressed, where, as always, finance will play an important role. A separate issue is the discussion on trade barriers, which is a priority for China and BASIC group as a whole. It is also unclear how much the US position will be changed.

Global GHG emissions are expected to peak and begin to decline in the coming years. Of course, all look firstly at China, whose share in the world as a whole [reaches 25%](#). In Baku, in the Chinese pavilion, as before, the official position was voiced - the peak before 2030, but it was said that the country is very close to the peak, perhaps it will be passed already in 2025. It is no coincidence that in solar energy and electric vehicles, global progress consists of China and "addition" of other countries (see International Energy Agency's [WEO 2024 report](#)). The problems of global emissions are discussed in more detail below in the Annex, where the recent adjustments of Russia data made in 2024 are also described.

The main trend in the world as a whole will be to achieve domestic carbon neutrality goals, which are outside of the PA, but ideally should be implemented through consistently adopted NDCs. In Baku, there were many talks on NDCs for 2035, which all countries should submit by the end of 2025. An attempt to advance the development of NDC Guidelines at COP 29 failed, the largest developing countries, Arab states and a number of other countries emphasizing that NDCs are *nationally determined* contributions and do not require uniformity. However, it is a signal to expect weak goals, in particular, the UAE already presented very ambitious NDC for 2035.

At the same time, there were many talks at informal events that strong domestic goals also generate strong co-benefits, including better access to international climate finance and more effective adaptation. At the level of companies and organizations, it was emphasized that in low-carbon development, co-benefits are very important thing (figuratively speaking, "coffee at a gas

station can generate more profit than the sale of gasoline, especially if price and/or revenue from gasoline is regulated by government agencies”).

The UNFCCC has been discussing the [transition away from coal or even all fossil fuels](#) for many years. Overall decision was not made in Baku, where such issues are usually spelled out in the UNFCCC, but this is unlikely to have a negative impact on general trend. If there would be Overall decision, it would likely have repeated the soft formulations of the Group 20 and previous COPs. Another thing is that on unofficial events in Baku there were a lot of talks about consolidating the finances of developed countries, MDB and private funds to facilitate the transition away from coal, in particular, in Indonesia and Vietnam. India was also mentioned, but as a more complex task for the not-so-near future. At the same time, no doubt was expressed on China’s gradual transition away from coal, everything would be fine without outside assistance.

The coal and fossil fuel issues are likely to be discussed in more detail not at COP 30 but at COP 31, which will be hosted by a country of the UN group “Western Europe and Others” (meaning developed countries). Currently, the two contenders, Australia and Turkey, failed to reach agreement in Baku, and the COP 29 document urges a decision on the issue no later than June, so that the Troika can start working. This COP is likely to be the next step “towards the beginning of the end of fossil fuels”, while Australia has informally stated that despite its coal exports, it is ready to take decisive steps.

In the same year 2026, there will probably more clarity on feasibility and scale of activities on transfer of carbon units on Art. 6.2 and 6.4. Here, much depends on Supervisory Committee on 6.4, which has effectively been given a mandate to make decisions on a wide range of issues, including baselines and changes to already adopted methodologies and standards.

Then, in 2027, it will be time to look again at adaptation, water, agriculture and food issues, as COP 32 will be held in Africa. The question of more specific parameters of the “balance” between adaptation and mitigation funding (set out in the financial goal), will be probably opened. Moreover, there will already be clarity on implementation of previously agreed doubling of funds (for 2019–2025 years) allocated by developed countries for adaptation in developing states.

Also in 2027, the global mechanism of international civil aviation, [ICAO CORSIA](#), which introduces mandatory GHG emissions compensation, is to start working. From the beginning of 2025, 129 states will participate in it on a voluntary basis (they do not include a number of large countries, in particular, Brazil, China, India, Russia and South Africa). The launch of the system is expected to increase the demand for carbon units. It is possible that the “stricter and more prestigious” units of Art. 6.4 will have advantages.

Then in 2028, it will be necessary to analyze situation at the second global stocktake (GST-2) at COP 33 in India. At the same time, a revision of the rules on Articles 6.2 and 6.4 is planned in 2028. The issue of activities on avoiding emissions may be raised (in June 2024, it was decided that such activities cannot generate carbon units), for example, in projects to prevent soil degradation, which is important, in particular, for Central Asia (before this, in particular, projects where the accumulation of soil carbon occurs as a result of the measures are eligible).

ПРИЛОЖЕНИЯ

“Gap” in global efforts on GHG emission reduction

The annual UNEP report on the global situation with anthropogenic greenhouse gas emissions ([Emission Gap Report 2024](#)) speaks of a growing “gap” between what is required to achieve the Paris Agreement (PA) goal of stabilizing global warming (keeping it well below

2 deg. C, trying to remain at 1.5 C from the 19th century level) and what is happening. GHG emissions continue to grow, in 2023 their total volume amounted to 57.1 billion ton of CO₂ equivalent (all gases are recalculated into the effect of CO₂ over 100 years), the uncertainty of estimations is ±5.5 billion, while the least certain are CO₂ flows during in land use, primarily in forests. In 1990, there were 38 billion ton of CO₂ equivalent, in 2000 41.5, in 2010 51. Emissions only slightly and briefly decreased due to COVID. The largest amount of CO₂ comes from the combustion of fossil fuels – almost 40 billion tons of CO₂ equivalent/year, methane emissions are about 10, and other gases are about 4 billion/year. Land use, including forestry, in the world as a whole is not a sink, but a source, estimated at 4±3 billion CO₂ equivalent /year.

By sector of the global economy, the largest share is accounted for electricity and heat generation (26%), followed by industry (20%) and transport (16%). Agriculture accounts for 11%, fuel operations (except combustion) account for 10%, land use and buildings add 7 and 6%, respectively. Waste operations are at the bottom of the list (4%).

The country-by-country estimate for 2023 was made without taking into account land use (due to the high uncertainty of estimates in this sector): China leads with 30%, the US 11%, India 8%, and the EU 6%. Emissions are decreasing in the EU and the US, while they are growing in China and India. According to the UNEP report, Russia accounted for up to 5%, or 2.4-2.7 billion tons of CO₂ equivalent, in 2022–2023. However, according to more detailed Russian calculations, in 2022 it was slightly more than 2 billion, or less than 4% of global GHG emissions.

More detailed calculations were included in the [latest Russian National Inventory Report](#) (received by the UNFCCC on November 10, 2024). It scrupulously recalculated the entire series since 1990, for 2022 emissions amounted to 2.05 billion excluding land use and only slightly more than 0.8 billion taking into account land use (see [set of detailed standard UNFCCC tables for each year from 1990 to 2022 attached to the report](#)). The main difference of the new data is a much higher absorption by forests, in 2022 about 1.2 billion/year. The scientific basis for the adjustments is described in the report and [its annexes](#), where you can also see detailed estimates of the uncertainty of all figures. In particular, for various greenhouse gas flows in forests, the uncertainty ranges from 20 to 80%. In accordance with the UNFCCC rules, the coefficients used in the recalculation were published in advance in professional scientific journals. There is a [detailed publication on terrestrial ecosystems of Russia as a whole](#) by the Institute of Global Climate and Ecology of the Russian Academy of Sciences and Roshydromet, according to which the total absorption of anthropogenic CO₂ is 2.7±1.7 billion tCO₂. This is more than CO₂ emissions in economic sectors. However, the work calculates the flows of methane and N₂O into the atmosphere, amounting to 1.3±0.8 and 0.3±0.1 billion tCO₂ equivalent. The final net absorption is 1.1±1.7, which is less than GHG emissions in energy sector and other sectors of the Russian economy by 0.8-0.9 billion.

The current situation and countries' plans for greenhouse gases, the goals set out in the NDCs, and long-term intentions to achieve carbon neutrality indicate that the world is on track to stabilize global warming in the second half of the century at 2.5 – 3 deg. C (from the second half of the 19th century, and almost 1.5 deg. C have already been passed). The UNEP report shows that the situation can be changed, that there is a great potential for reducing emissions. Already by 2035, emissions can be reduced by 40 billion tCO₂ equivalent per year with relatively small additional costs, estimated at 1-2 trillion dollars per year. This development allows us to keep global warming below 2 deg. C. The greatest contribution can be made by generation of electricity without or with low emissions and other measures in the energy sector - up to 15 billion, while the growth of electricity generation will reduce this figure by about 4 billion. In second place is land use (contribution to the reduction up to 13 billion), where forestry plays the main role. Then comes industry (6.5 billion), transport and buildings (5 and 4 billion). There are opportunities, but

countries are in no hurry to take full advantage of them. At the same time, in Baku at COP 29, almost all countries, many companies and organizations in their pavilions demonstrated clear and significant results of "green" development of energy, transport and industry, conservation of forests and soils, development of agriculture without increasing emissions.

“Gap” in efforts on adaptation to climate changes

UNEP's annual [Adaptation Gap Report 2024](#) highlights the inadequacy of measures, the growing "gap" between what is being done and what needs to be done for proper adaptation to current and future climate changes. The report was released specially before the COP.

In developing countries and in the world as a whole, adaptation measures are increasing, and the flow of adaptation funds from the Global North (developed countries) to the Global South (developing countries) is also increasing. According to the report, it amounted to \$21 billion in 2021 and \$28 billion in 2022 (data for 2023 is not yet available). In the context of the new financial goal of the PA, it is emphasized that the assessment of the adaptation needs of the Global South is more than \$200 billion per year. At the same time, the NDC and national adaptation plans contain even higher figures, totaling \$400 billion per year by 2030. Almost all of these adaptation plans (95%) contain actions to adapt agriculture and food production. 93% of the plans pay attention to the protection of ecosystems and the conservation of biodiversity. This is followed by water issues (84%), infrastructure for human life (77%) and health care (75%). On the other hand, national adaptation plans pay little attention to solving the problem of poverty (29%) and preserving cultural heritage (18%).

At the same time, a negative feature of adaptation plans in developing countries is the emphasis on planning as such. Compilation plans for the future is included in 48% of current documents, while monitoring and evaluation of results is given attention in only 20% of current plans, and risk assessment is almost absent, only in 5% is it included in adaptation activities.

The UNEP report analyzed 168 adaptation projects carried out in developing countries. They received about a trillion dollars through various UN funds, and almost another 5 trillion was attracted in the form of co-financing, which indicates a high interest of countries in adaptation. The majority of projects (64%) were somehow related to agriculture and water, including coastal issues. However, early warning systems accounted for only 13%, and ecosystem-based adaptation was almost not represented (3%).

The results of only 4% of projects were highly rated, the majority were considered satisfactory (41%) or relatively satisfactory (38%), and the results of 17% of projects were not considered satisfactory. It is also difficult to call the situation with long-term sustainability of the results favorable. According to this criterion, only 60% successfully passed the "test" on sustainability, and 40% did not. It was also noted in the report that representatives of about 500 cities announced a variety of adaptation measures, about 3,500 in total, but no information was provided to evaluate the achieved results.

This situation, combined with the lack of funds, greatly slows down the development of adaptation. For the implementation of the financial goal of the PA and for its adaptation part, a detailed risk assessment, "transparency" of the allocation of funds and their targeted use are extremely important.