ITUC Report of the COP27
Climate Negotiations in Sharm El-Sheikh
6 to 20 November 2022

Summary

The United Nations climate conference COP27 in Sharm El-Sheikh (Egypt) took place from 6 to 20 November at a time of major international instability due to the impacts of the war in Ukraine, geopolitical tensions, an energy and cost of living crisis, indebtedness and the increasing impact of climate change. In East Africa, millions of people face a severe food crisis due to lack of rain; record breaking rain in July and August led to extensive flooding in Pakistan that caused at least 1700 deaths and 33 million people lost their houses and livelihoods. Large parts of the northern hemisphere were exceptionally hot in 2022.¹

The UNFCCC negotiations brought hope for vulnerable countries as they recognised the need for finance to respond to loss and damage associated with the adverse effects of climate change and made an historic decision to establish a fund and the necessary funding arrangements for Loss and Damage. This is an important win for the developing countries after a hard-fought battle that received broad support from civil society organisations, including unions.

The most disappointing result of COP27 was the lack of progress on mitigating climate change. A failure in multilateralism that was urgent in 2022. Limiting global warming to 1.5°C requires rapid, deep, and sustained reductions in global GHG emissions of 43% by 2030 relative to the 2019 level, while we know emissions are still going up. The sense of urgency was missing. Consensus among countries to make progress on this crucial issue that will decide about the survival of humanity on our planet was our major disappointment. How could this happen? First, there were never so many fossil-fuel lobbyists present at a COP, outnumbering many developing country

and observer delegations.\(^2\) For every workers’ representative there were 6 fossil fuel lobbyists present at COP27. Second, the energy crisis exacerbated by the war in Ukraine made many developed countries and China keen on signing new fossil fuel deals.\(^3\) This clearly empowered especially the oil producing countries to refuse any language on phasing out fossil fuels. On the one hand, the door is being opened to "low emission energies", which might refer to gas and carbon capture and storage. On the other hand, G77 refuses to take on mitigation commitments as long as the developed countries do not make progress on mitigation, adaptation and especially climate finance.

COP27 saw further increased attention to ‘Just Transition’ with several references in the Sharm el-Sheikh Implementation Plan (SeSIP), including the creation of a work programme on just transition that will include an annual high-level ministerial round table. Just transition is further defined with references to ‘social dialogue’ and ‘social protection’. The concept is also being used by developing countries to ask for financial support for their development. These are major steps forward for the global trade union movement. It’s a clear hook to link our trade union work to the implementation of climate policies; it’s also a major responsibility of the movement to pick up these opportunities and to keep referring to the definition of just transition in the preamble of the Paris Agreement.\(^4\) It is important that ‘just transition’ is now discussed beyond the often-undeveloped negotiations area of ‘Response Measures’.

Finally, calls to reform the massive COP process, with a record of 45,000 delegates participating in the negotiations in Sharm El-Sheikh grew louder. There was major dissatisfaction with the Egyptian presidency on many fronts: from the way the negotiations were handled over the organisation of the venue, transport issues, unacceptable high hotel costs and charging practices. There was no space for civil society to organise in a free way events outside the conference venue. There was intimidation by Egyptian officials surveying the meetings of observer organisations. This is a very disturbing evolution; especially in view of the upcoming COP28 in the United Arab Emirates. At COP28 the closure of the important Global Stocktake is on the agenda. These negotiations need to be held in full transparency, with equitable participation of all parties and stakeholders and with the guarantee that all human and labour rights are respected.

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\(^2\) [https://kickbiogovernment.org/big-polluters-at-cop27](https://kickbiogovernment.org/big-polluters-at-cop27)

\(^3\) [https://www.opendemocracy.net/en/cop27-oil-gas-africa-climate-change/](https://www.opendemocracy.net/en/cop27-oil-gas-africa-climate-change/) See here for an overview made by NGOs of ‘clean’, ‘gas’ and ‘hydrogen’ deals made at COP27: [https://docs.google.com/spreadsheets/d/fV9pu3DQ2G6nsVDWMdS2w4BegAyWkukJmT2n5QnwQ9js/edit#gid=572164085](https://docs.google.com/spreadsheets/d/fV9pu3DQ2G6nsVDWMdS2w4BegAyWkukJmT2n5QnwQ9js/edit#gid=572164085)

\(^4\) “Taking into account the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities,” [https://unfccc.int/sites/default/files/english_paris_agreement.pdf](https://unfccc.int/sites/default/files/english_paris_agreement.pdf)
The global trade union movement went to the UNFCCC COP27 in Sharm El-Sheikh with the following demands. We’ll evaluate the results of COP27 on these issues.

- The implementation of just transition plans for the workforce
- Guarantee human rights, labour rights and inclusive participation
- Raise mitigation ambition and create quality jobs with just transition
- Adaptation needs social protection plans and funding
- Deliver on a Loss and Damage facility
- Provide the urgently needed climate finance to invest in just transition

1. The implementation of just transition plans for the workforce

The concept of Just Transition has found its way in the general vocabulary of the climate negotiators. Broader use of the concept has also led to a broader interpretation of its meaning. First there is the strong link with the energy transition towards more renewables. The Sharm el-Sheikh Implementation Plan refers to the need for a just transition to net-zero emissions in the ‘long-term low greenhouse gas emission development strategies’ that countries should prepare. Second, the concept is being used as a lever for (financial) support in these transitions, specifically for developing countries.

A substantial recognition of the concept of just transition comes with the decision to set up a work programme on just transition including an annual high-level ministerial round table. There is also the affirmation that “sustainable and just solutions to the climate crisis must be founded on meaningful and effective social dialogue and participation of all stakeholders”. It is the first time that UNFCCC negotiations refer to the need of ‘social dialogue’. This is an important win for the trade unions and a big responsibility to make the social dialogue work and explain to the climate policy makers what the difference is between social dialogue and stakeholder participation based on ILO definitions.

The reference that a just and equitable transition must “include social protection so as to mitigate potential impacts associated with the transition” is a second important win for the trade union movement by defining the concept of just transition with a labour focus.

It is up to the social partners (trade unions, employers and governments) to deliver on this and use these references in the SeSIP to ask for this social dialogue to take place in countries, sectors and companies. And, to set up comprehensive and universal social protection schemes to deal with the impact of climate change and climate policies. The global trade union movement will have to lead on this in order to make it happen. The proposed work programme and the ministerial high-level ministerial round tables are important instruments to follow up on the implementation of these just transition commitments, and ensuring funds are allocated to implement the work.

Some crucial elements of the ILO’s Just Transition Guidelines are missing in the decisions of COP27; notably the demand to respect and promote fundamental labour rights. There is still a long way to go to have support from all countries for labour rights at the climate negotiations. Such progress was not expected to come from the COP27 presidency (Egypt); a country that has repressive labour laws, where there is prosecution of strikers, union busting and dismissal of
union activists. This will also be a major challenge next year when COP28 takes place in the United Arab Emirates where workers’ rights are being violated.\(^5\)

An important contribution underlining the labour focus of just transition was made by the first Just Transition Pavilion of the ILO (International Labour Organisation). The pavilion was set up with financial support of the European Commission and support from ITUC and IOE (International Organisation of Employers) for the programming. ITUC contributed to many events that were organised to illustrate the tripartite aspect of just transition.\(^6\)

ILO launched at COP27 the “Green Jobs for Youth Pact”\(^7\) and the “Just Transition Finance Tool for banking and investing activities”\(^8\).

2. Guarantee human rights, labour rights and inclusive participation

The full and comprehensive protection of human rights is required to guarantee support and trust in society to implement the ambitious climate policies the world urgently needs. ITUC joined the call on heads of state of the other United Nations constituencies - representing thousands of climate justice, women and gender, labour, youth, Indigenous organisations - to urge the Egyptian government to release the arbitrarily detained activist Mr. Alaa Abd El-Fattah and all prisoners of conscience in Egypt who are targeted for their peaceful activism. The letter states that “those who have disproportionately suffered the horrific harms of the climate emergency are also those who have done the least to cause the crisis, and a climate just world is one that corrects these inequities head-on. There can be no climate justice without human rights.”\(^9\) The phrase “We Have Not Yet Been Defeated” became the unofficial slogan of #COP27, a reference to the title of a book by Alaa Abd El-Fattah.\(^10\)

The ITUC expressed its deepest concerns regarding the serious and systematic violation of human and trade union rights in Egypt and sent a protest letter on August 30 on labour and human rights to President Abdelfattah el-Sisi of Egypt.\(^11\) During the Trade Union Strategy Day on Sunday 13 November, Mr. Kamal Abbas, General Coordinator of the Center for Trade Unions and Workers Services (CTUWS), an activist group for independent unions in Egypt, shared with the trade union delegation at COP27 the problematic situation of the trade unions in Egypt. A detailed overview of the important work that Mr. Abbas is doing can be found in the reports that they prepare. One of the main conclusions is very bitter for the workers of Egypt: “Instead of welcoming active trade unions that enjoy the confidence of workers and can represent workers and negotiate on their behalf, many government agencies seemed to wish only for the existence of false structures that lack any content or vitality.”\(^12\)

On gender equality in the UNFCCC negotiations, specifically the expected mid-term review of the gender action plan (GAP), the Women and Gender Constituency left COP27 deeply frustrated

\(^5\) https://www.globalrightsindex.org/en/2022/countries/are
\(^9\) https://t.co/04A3Sh99eB
\(^10\) See also this video by the Intercept: Egypt’s climate summit was a “rehearsal” for COP28 in Dubai. https://theintercept.com/2022/11/26/egypt-cop27-climate-human-rights/
\(^11\) ITUC Protest letter Egyptfinaldocx.pdf
\(^12\) Report Trade Unions Elections 2022-2026_1.pdf
with the process and outcome. “The WGC recognizes an eleventh hour decision under the gender action plan but we remain deeply frustrated with the total lack of substantive review that occurred here and in the lead up to COP. Gender experts and women’s rights advocates were left out of the rooms while Parties tinkered at the edges of weak and vague text that failed to advance critical issues at this intersection, nor deliver adequate funding. We demand that the social protection of women and girls in all their diversity be at the forefront of the gender and climate change negotiations of the UNFCCC.”

The indigenous peoples’ organisations saw their issues mainstreamed across agenda items at the start of the conference but noticed that countries began to compromise in the final days. Agreements on the rules around carbon offset markets included limited language on recognising the rights of Indigenous peoples and the need to consult communities on the use of land. Indigenous delegates warmly welcomed the creation of a loss and damage fund which they say will greatly help Indigenous communities already impacted by climate change.

3. Raise mitigation ambition and create quality jobs with just transition

The ITUC’s demand to governments to include the need for just transition policies and measures in the COP27 decisions on mitigation, including in the ‘work programme to scale up mitigation ambition and implementation’ was met with a reference to ‘just transitions’ in the decision on the scope of the mitigation work program. Also, in the decision on the work programme on just transition in the SeSIP there is reference to the work programme for urgently scaling up mitigation ambition and implementation. While these references are not very concrete for the moment, they provide opportunities for the trade union movement to include labour related issues in the work on mitigation in the coming years.

The main conclusion on the mitigation outcomes of COP27 is a lack of progress and ambition. This is one of the main negative points of COP27. The decision that the work programme will be “non-prescriptive, non-punitive, facilitative, respectful of national sovereignty, ... and will not impose new targets or goals” is in complete contradiction with the title of the work program that asks for urgently scaling up mitigation ambition and implementation. The open door for the fossil fuel industry, the brake on any ambitious commitments by the newly developed countries and the hypocrisy of the EU, Canada and the US on mitigation due to their gas initiatives, are to blame for this.

The ‘Article 6 negotiations’ on market and non-market mechanisms managed to deliver a significant amount of guidance that will help operationalise and scale up international cooperation on market and non-market approaches to reduce emissions, support adaptation, and promote sustainable development. The trade union delegation joined civil society organisations campaigning against language on ‘removals’ as the initial text was vague and lacked critical safeguards and rights provisions. COP27 decided to send the text back to the Article 6.4 market mechanism’s Supervisory Body for further work. However, this was done without references to

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16 Carbon dioxide removal methods include afforestation, agricultural practices that sequester carbon in soils, bioenergy with carbon capture and storage, ocean fertilization, enhanced weathering, and direct air capture when combined with storage.
the need for any market to contribute to overall ambition and the imperative to respect and protect human rights.

A win for the human rights constituency, however, was an indirect reference in the cover decisions to UN General Assembly Resolution 76/300 from 2022, on the human right to a clean, healthy, and sustainable environment.

4. Adaptation needs social protection plans and funding

COP27 has not delivered for those hoping that agreements on Adaptation would make a significant step towards implementing the “Glasgow–Sharm el-Sheikh work program on the global goal on adaptation”, decided at COP26. As this has always been a priority for the African countries, this was a major disappointment. The negotiations will continue with a focus on ‘enhancing the understanding of what the goal actually means and how to measure progress towards achieving it’.

The global trade union movement wants to integrate in the work on Adaptation more attention to the need for social protection measures. More than 4 billion people in the world do not have any type of social protection. The most vulnerable in the global North and South need access to health care, unemployment benefits, and other social protection benefits to deal with the impact of the climate crisis that endangers their work and livelihoods.

The reference in the SeSIP that a just and equitable transition must “include social protection so as to mitigate potential impacts associated with the transition” is an important win for the trade union movement in defining the concept of just transition with a labour focus. Together with the ILO the labour movement must make progress on delivering universal social protection solutions as part of the climate adaptation policies, while recognising that these measures are also important for mitigation and loss and damage measures.

5. COP27 delivered on a Loss and Damage facility

Poor and vulnerable countries, which have not contributed to the climate crisis, but are already bearing the enormous impact of drought, floods and other extreme weather events, must be compensated for the impact of the climate crisis, a demand the ITUC supports. Loss and damage has been a priority for small island developing states since the 1990s. Developed countries have traditionally resisted calls for specific loss and damage funding, partly in fear of related liability and compensation calls that might ensue given their responsibility for most historical emissions. As Tasneem Essop of Climate Action Network International indicated: “the historic outcome at COP27 on the Loss and Damage Fund was delivered through the collective struggle of developing countries, civil society and movements”. Her colleague Harjeet Singh added: “With the creation of a new Loss and Damage Fund, COP27 has sent a warning shot to polluters that they can no longer go scot-free with their climate destruction. From now on, they will have to pay up for the damages they cause and be accountable to the people who are facing supercharged storms, devastating floods and rising seas. Countries must now work together to ensure that the new fund can become fully operational and respond to the most vulnerable people and communities who are facing the brunt of climate crisis.”

6. Provide the urgently needed climate finance to invest in just transition

The Sharm el-Sheikh Implementation Plan is clear on the need for scaled up climate finance: “About USD 4 trillion per year needs to be invested in renewable energy up until 2030 to be able to reach net zero emissions by 2050, furthermore, a global transformation to a low-carbon economy is expected to require investment of at least USD 4–6 trillion per year”. Despite this urgency, there was no progress made at COP27 delivering the necessary climate finance due to diverging views between developing and developed countries. Developing countries underscored the urgency of first having clarity on the “quantum” and time frame of the new, post-2025 collective quantitative goal on climate finance, and discussing the specifics afterwards. Developed countries continued to insist on discussing technical aspects first, and then agreeing on a numerical target in 2024. The decision adopted delivers little for the developing countries in this regard, which is the second major disappointment of COP27.\(^\text{18}\)

Given the limited results of the negotiations it is also not a surprise that the demand of the global trade union movement to incorporate just transition criteria in all climate finance agreements did not get traction. The declaration “Supporting the Conditions for a Just Transition Globally” that contains just transition criteria and was signed at COP26 by major donor countries was ignored and forgotten by countries.\(^\text{19}\) However, small elements of progress can be seen in the demands by developing countries to ask for “support for just transitions” and the work by the ILO on the “Just Transition Finance Tool for banking and investing activities”.\(^\text{20}\)

A new form of climate finance, launched at COP26 in Glasgow, are the Just Energy Transition Partnerships (JETPs). JETPs are country-specific and negotiated on a government-to-government basis. They mix bilateral, private, philanthropic, and in some cases multilateral finance.

South Africa was the first country to negotiate a JETP and governments launched its Investment Plan at COP27. The Investment Plan is not final as the South African government agreed to consultations with trade unions and civil society after their protests at being locked out of the negotiations. At the G20 in November 2022, Indonesia and donor countries committed to negotiating a JETP Investment Plan over the next six months. Other potential JETPs are in the pipeline for Vietnam, Senegal, and potentially India. Donors to the JETPs include Germany, the EU, the UK, France, Italy, Norway, Canada, and the US. Commitments by donor countries involve mostly loans - concessional and not, guarantees, grants, and mobilisation of private sector funding.

Trade unions from countries involved in potential JETPs expressed serious concerns. So far, the negotiations with donors involve a complete lack of social dialogue; a similar lack of transparency about the terms and conditions of these deals; little to no money for a Just Transition for workers; and a strong emphasis on privatisation.

\(^{19}\)https://unfccc.int/sites/default/files/resource/cma4_auv_8e_NCQG.pdf
\(^{20}\)https://ukcop26.org/supporting-the-conditions-for-a-just-transition-internationally/
7. Global Stocktake

The Global Stocktake of the Paris Agreement (GST) is a process for taking stock of the implementation of the Paris Agreement with the aim to assess the world’s collective progress towards achieving the purpose of the agreement and its long-term goals. Countries committed to present and implement their Nationally Determined Contributions (NDCs) in a cycle of 5 years. The first GST will run from 2021 to 2023 and will be repeated every 5 years thereafter.

The GST facilitates the assessment of global collective progress on three thematic areas: (1) Mitigation, (2) Adaptation and (3) Means of implementation and support. The second technical dialogue of the GST took place at COP27. This process has to conclude with a political decision at COP28. The United Nations Secretary-General decided to convene a Climate Ambition Summit in 2023 ahead of the conclusion of the first GST at COP28.

While the many meetings that took place (technical dialogues, world café’s, poster sessions) generated a lot of important insights, often because of the active participation of experts and observers, it remains unclear how all this work will be translated into a strong political decision that reflects the need to scale up climate ambition at all levels at COP28. It was a positive sign to see substantial attention go to just transition in the meetings of the GST. Samantha Smith, director of the Just Transition Centre, participated as one of the invited experts in the mitigation sessions, Prof Nick Robins from the London School of Economics was one of the experts in the finance sessions, also stressing the need for a just transition.

8. Response Measures

Impacts of implementation of “Response Measures” is understood as the effects arising from the implementation of mitigation policies to combat climate change. These impacts are discussed in the Forum on Response Measures and the Katowice Committee on the implementation of Response Measures. While originally this area of negotiations dealt mainly with the demand for compensation by oil producing countries when implementation of climate policies would reduce their revenues out of selling fossil fuels. The scope was broadened to include ‘economic diversification’ and, since the COP17 in Durban (2011) ‘just transition’. The discussion on response measures at COP27 stayed fateful to its reputation of barely making any progress. The midterm review of the forum’s workplan could not be concluded and there was no agreement on an informal note with actions in response to the midterm review that includes bracketed text on, inter alia, carbon pricing, fossil fuel subsidies, coal power, capacity building, and a “just transition hub/platform.” The latter was said to be a proposal by Saudi Arabia, but there is no additional information available.

9. Are the COPs fit-for-purpose?

Calls to reform the massive COP process, with a record of 45,000 delegates participating in the negotiations in Sharm El-Sheikh, grew louder this year. There was major dissatisfaction with the Egyptian presidency on many fronts: from the way the negotiations were handled over the organisation of the venue, transport issues, unacceptable high hotel costs and charging practices. There was no space for civil society to organise events outside the conference venue in a free way. Having a meeting room for the trade union delegation was a daily struggle in the first week. There was intimidation by Egyptian officials surveying observer organisation meetings.
This is a very disturbing trend; especially in view of the upcoming COP28 in the United Arab Emirates.

Mr. Simon Stiell, head of the UN Framework Convention on Climate Change, said he intends to review the COP process to make it as “effective as possible” following the controversial conclusion to this year’s COP27 in Egypt, as reported in the Financial Times. In the article some diplomats are quoted questioning the integrity of the COP27 Egyptian presidency: “I’ve never experienced anything like this: untransparent, unpredictable and chaotic”. Countries’ negotiating teams were given a short amount of time in the early hours of Saturday morning to review draft texts for several key issues. All these practices are not normal procedures and did not contribute to the necessary trust in the process.

An important effort to contribute to the credibility of the multilateral process came from the UN Secretary-General’s High-Level Expert Group on Net-Zero Commitments. They published a report at COP27, serving as a how-to guide to ensure credible, accountable net-zero pledges by industry, financial institutions, cities and regions.22

10. Unions mobilise on climate change at COP27

The global trade union movement was represented at COP27 by some 100 delegates from more than 40 countries. As there were only limited civil society activities possible outside the conference venue, they all participated mainly in the negotiations inside the venue. The movement saw the strongest engagement in any COP by many delegates on the different negotiation issues, with active participation to follow meetings and deploy coordinated advocacy strategies. The delegation was led by Bert De Wel, who is the focal point for the Trade Union NGOs (TUNGO) at UNFCCC. For the duration of COP27 he received valuable assistance from two co-focal points, Rhoda Boateng (ITUC Africa) and Patrick Rondeau (FTQ, Canada).

The ITUC was represented by ITUC Secretary General Sharan Burrow at the High-Level segment with heads of state. On Wednesday 9 November the ITUC organised a major side event on Just Transition: providing decent work and quality jobs are tools for climate policy implementation. Representatives from many ITUC affiliates and Global Union Federations (ITF, IndustriALL Global, Education International and BWI) organised and participated in some 40 side events, the highest number ever for a COP.

On Saturday 12 November, hundreds of people marched inside the UN Conference venue in a protest march. The march was held inside the conference venue as the conditions for a free and safe activity of civil society in the streets of Sharm El-Sheikh were not guaranteed by the Egyptian government. The trade union movement participated and was represented at the head of the march by ITUC Africa deputy General Secretary Eric Manzi who also addressed the mobilisation.23

On Sunday 13 November, some 100 trade union representatives met to jointly discuss our strategy to increase our impact on the climate policy debate as the global labour movement.

21 UN climate chief plans shake-up of COP annual talks after criticism: https://www.ft.com/content/7f4b8029-258a-4af5-9e72-abcd73646be1
ITUC Africa deputy General Secretary Eric Manzi was the chair of the meeting, Yvonne Blos from FES welcomed the participants. We discussed our strategy on the negotiations at COP27 (Bert De Wel and co-focal point Patrick Rondeau) and shared information on the work that trade unions are doing in Africa and the MENA region. Especially the intervention of Mr. Kamal Abbas, General Coordinator of the Center for Trade Unions and Workers Services (CTUWS) was impressive. Rhoda Boateng presented her work in Africa and Hind Benammar, deputy General Secretary of the Arab Trade Union Confederation (ATUC) provided a perspective towards the COP28 in Dubai.

Break-out working groups allowed for a deeper discussion on three topics: (1) National Just Transition agreements and laws, (2) Trade union climate action and mobilisation and (3) Just Transition in collective bargaining. In a final plenary session, Prof Nick Robins (London School of Economics) gave the participants a comprehensive overview of climate finance and developments in “investing in just transition”. Samantha Smith presented the work of the Just Transition Center.

The conclusions of the Strategy meeting will be shared with delegates and the ITUC affiliates. Report finalised on 7 December 2022.

Bert De Wel
Climate Policy Officer ITUC
UNFCCC focal point
TUNGO head of delegation at COP27
Highlights in images

Trade union coordination on Sunday 6 November “occupying” the ILO Just Transition Pavilion from the first day.

Trade unions’ statement in the opening plenary on Sunday 6 November by Rebecca Okello (COTU K):
20221106 TUNGO Statement Opening Plenary_v2.pdf
ITUC Side Event on Wednesday 9 November: **Just Transition: providing decent work and quality jobs are tools for climate policy implementation.** Speakers: • Sharan Burrow, ITUC • Selwin Hart, UN Special Adviser on Climate Action • Ian Fry, Special Rapporteur on Human Rights and Climate Change • Stephen Cotton, ITF • Samantha Smith, JTC • Eric Manzi, ITUC Africa • Lebohang Mulaisi, COSATU South Africa

Eric Manzi (ITUC Africa) speaking at the Climate march on Saturday 12 November.
The global trade union delegation participating at the Strategy Day on Sunday 13 November.

Mr. Kamal Abbas, General Coordinator of the Center for Trade Unions and Workers Services (CTUWS) and Ms. Hind Benammar, Deputy General Secretary of the Arab Trade Union Confederation (ATUC) at the Trade Union Strategy Day at COP27.
Statement delivered by Juman Kubba (ITF) and Sacha Dierckx (FGTB) at the closing plenary on Sunday 20 November: 20221120 TUNGO statement Closing Plenary.pdf