

The Effect of the Covid-19 Pandemic Period on IPCC Works

Covid-19 Pandemi Döneminin IPCC Çalışmalarına Etkisi

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Abstract

With the emergence of the Covid-19 pandemic in December 2019 and the fact that face-to-face meetings began to be held electronically all over the world, the IPCC had to hold its meetings in a virtual environment. However, participating in these meetings held online from many different parts of the world and on a very large scale brought along some difficulties. Within the scope of this study, it was investigated how the activities of the IPCC were affected by the pandemic process, what problems occurred due to the virtual environment of the activities, and how successful the IPCC was in solving these problems. Among the aims of the study is to guide large organizations that need to be held in virtual environments in special situations such as pandemics in the future, to provide insight into these studies, and to shed light on what problems may arise. As a result of the study, it was concluded that the IPCC faced serious difficulties due to the size of the climate change organizations held in virtual environments and the participation from different locations, but these problems were overcome as a result of intensive and detailed studies, and as a result, it held productive meetings. However, it can be said that there are time differences, possible technological infrastructure deficiencies, and similar difficulties, that the agenda items are not discussed sufficiently, and thus the efficiency of the meetings decreases. Various suggestions have been made to ensure that the IPCC and similar international large meetings can be carried out efficiently. There are not many studies in the literature on how large organizations such as the IPCC tend to work during the pandemic period. It is thought that this study will contribute to the literature in terms of providing foresight on this subject.

Keywords: IPCC, Corona Virus, Covid-19, Pandemic, Climate change, Online meeting.

Özet

Aralık 2019'da Covid-19 pandemisinin ortaya çıkması ve tüm dünyada yüz yüze görüşmelerin elektronik ortamda yapılmaya başlanmasıyla birlikte IPCC kendi toplantılarını sanal ortamda yapmak zorunda kaldı. Ancak dünyanın birçok farklı yerinden online olarak ve oldukça geniş ölçekte gerçekleştirilen bu toplantılara katılım bazı zorlukları da beraberinde getirdi. Bu çalışma kapsamında IPCC faaliyetlerinin pandemi sürecinden nasıl etkilendiği, faaliyetlerin sanal ortamdaki kaynaklanması nedeniyle hangi sorunların meydana geldiği ve IPCC'nin bu sorunları çözmede ne kadar başarılı olduğu araştırılmıştır. İleride pandemi gibi özel durumlarda sanal ortamlarda yapılması gereken büyük organizasyonlara yol göstermek, bu çalışmalara rehberlik etmek ve ne gibi sorunlar çıkabileceği konusunda ışık tutmak çalışmanın amaçları arasındadır. Çalışma sonucunda IPCC'nin sanal ortamlarda gerçekleştirilen iklim değişikliği organizasyonlarının büyüklüğü ve farklı lokasyonlardan katılım nedeniyle ciddi zorluklarla karşılaştığı ancak yoğun ve detaylı çalışmalar sonucunda bu sorunların aşıldığı, bunun sonucunda verimli toplantılar gerçekleştirdiği kanısına varılmıştır. Ancak zaman farkları, olası teknolojik altyapı eksiklikleri ve benzeri güçlüklerin olduğu, gündem maddelerinin yeterince görüşülmediği ve dolayısıyla toplantıların etkinliğinin düştüğü söylenebilir. Hem IPCC hem de benzeri uluslararası büyük toplantıların maksimum verimle gerçekleştirilebilmesi için çeşitli önerilerde bulunulmuştur.

Anahtar Kelimeler: IPCC, Corona Virüs, Covid-19, Pandemi, İklim değişikliği, Online toplantı.

1. INTRODUCTION

Global climate change, especially in the last few decades, has been causing serious problems in the whole world's ecosystem, threatening all living things, and because the problem is very important and has global effects, it is emphasized and discussed by wide circles in the international arena. [1]. The IPCC was established in 1988 in Geneva, Switzerland, within the body of the United Nations, to set policies for governments and decision-makers to minimize the human-induced effects of climate change. Today, 195 countries are members of the IPCC. Since its establishment, the IPCC has been carrying out various activities with wide participation, organizing meetings, seminars, panels, symposiums, conferences, and workshops at irregular intervals and publishing reports as a result. The IPCC was holding all these events face-to-face in many different countries and cities of the world until the middle of 2020.

The world has entered a rather extraordinary period with a virus outbreak called as "COVID-19" or "coronavirus pandemic", which emerged in Wuhan, the capital of the Hubei region of China, on December 1, 2019. Morens et al. express this situation as "Since December 2019, the world has watched the slow-motion birth and rapid growth of a new pandemic disease (the coronavirus, CoV or COVID-19)" [2]. Thus, spread globally and seriously threatened the lives of all people, the pandemic brought radical changes in people's lifestyles and working lives. The rapid spread of the virus as a result of communication and interactions among people has made maintaining social distance one of the most effective measures that can be taken against the disease. This situation has led to changes in all activities carried out in communities. As a result of all these, many activities, especially bureaucratic and scientific meetings that are traditionally held face to face, have started to be virtually held. Schmidtner et al. reveal that the pandemic has significantly changed the

way of working, as direct face-to-face communication has been replaced by online meetings using video conferencing, chat, and cloud-based collaboration [3]. Although virtual communication techniques were used before the pandemic, they started to be carried out widely and with wide participation during the pandemic period. Zibrek et al. argue that due to the COVID-19 pandemic, the world has shifted to a new way of working and living, and many of the ways we communicate and interact, radically changed since 2020 [4]. In support of these claims, Dua et al., in the field of scientific conferences, argue that only virtual meetings were possible during the pandemic process, with the necessity of social distancing, the importance of wearing masks, and travel restrictions [5].

As there are many advantages of holding meetings online, they also contain some difficulties and troubles. Having the opportunity to attend virtual meetings without having to travel from anywhere provides convenience in terms of both comfort and finance. However, some problems may arise in terms of both local conditions and technical issues, especially in online meetings where participation is high. Hanover made a comparison between virtual and physical meetings and stated that the rapid emergence and early maturation of virtual teaching and learning models can be considered as one of the positive by-products of the momentum created by the pandemic in addition he emphasized that physical meetings have virtues and are important for social interactions, so the author stood at the inflection point, comparing the optimal integration of physical and virtual conferences into a hybrid model to finding a sweet spot [6].

As a result of the inability to hold face-to-face meetings during the pandemic period, not many studies have been found in the literature on how to organize large organizations. This study aims to examine the strategies

developed by the IPCC in the face of the challenges arising from the pandemic and to shed light on large organizations to be held in similar situations. In this respect, it is thought that it will benefit the literature.

2. MATERIAL AND METHOD

Within the scope of this study, an extensive literature review was conducted. During the pandemic period, although some studies were performed on the virtual events found in the current literature, however, not many studies were performed on how the IPCC managed its work during that period. In this respect, it is thought that this study will have a contribution to the literature. To understand how the IPCC followed during the pandemic period, the event calendars, announcements, activities, meeting reports, and minutes shared by the IPCC were examined in detail, together with the literature review. As a result of all these examinations and research, the problems that the IPCC has experienced during the pandemic period and the ways of overcoming them have been tried to clarify. Within the scope of this study, the subject of the research is presented as a summary in the first part. Afterward, the details about the subject are given in the introduction part. Just afterward, the studies carried out by the IPCC during the pandemic period have been conveyed chronologically together with the techniques used and their purposes. Under the next title of the study, the difficulties faced by the IPCC during the pandemic and the strategies developed to solve these difficulties are interpreted and detailed. Afterward, the "IPCC's works conducted after the pandemic period" title is given so that the period after the pandemic has lost its effect can be observed in terms of IPCC studies. In the last part, the results and some suggestions are presented.

3. THE IMPORTANCE OF IPCC ACTIVITIES FOR THE EARTH AND THE LIFE

The problem, which was expressed as global warming in previous years, and is today known as global climate change threatens the world as well as all living, and continues to occupy the world's agenda intensely. Among the most important consequences of global climate change is the decrease in freshwater resource availability. Börü and Toprak (2022) state that there is an increase in drinking water need because there is a dramatic increase in global population and global climate change impacts caused by greenhouse gases released into the atmosphere [7]. Global climate change hurts the natural water cycle therefore important problems occur in freshwater demand. The basis of global climate change is the emission of greenhouse gases produced by human activities, particularly using of fossil fuels. Climate change warms the globe, evaporates the existing water resources, and reduces the amount of freshwater that can

be used easily. To protect water resources, the negative consequences of global climate change must be minimized. In the last few decades, as it began to be understood that climate change is caused by human activities, various organizations, protocols, conventions, and international meetings and the texts from these meetings have emerged on a global scale (i.e.. IPCC, Kyoto Protocol and UNFCCC, etc.).

The IPCC (Intergovernmental Panel on Climate Change) can be considered the largest organization that has wide global participation, adopts a widespread working style, and has adopted the mission of minimizing the negative consequences of climate change. The IPCC, of which almost all countries around the world are members, continues to work as a serious authoritarian organization on climate change. Within the scope of these studies, IPCC aims to guide its members (states or organizations) to take responsibility for the issue, by examining the data and studies related to climate change around the world on what should be done next to reduce or eliminate the risks posed by climate change. To achieve this goal, it publishes comprehensive reports by researching studies on the subject and organizing panels. Based on all these, it can be concluded that the IPCC has an important position in minimizing the negative consequences of climate change. For this reason, in terms of protection of the life and environment, it is important to ensure the healthy continuation of the activities carried out by the IPCC, its efficiency and productivity to be high.

4. IPCC'S WORKS CONDUCTED DURING THE PANDEMIC PERIOD

Due to the spread of the virus, as the Covid-19 pandemic, which emerged at the beginning of December 2019, affected all social life, replacing face-to-face meetings to virtual took some time. The IPCC had the opportunity to organize its own events at the COP 25 climate change conference held in Madrid, Spain, between December 2, 2019 and December 18, 2019, when the virus emerged and has not yet started to be mentioned. The third lead author meeting was held in Faro, Portugal, with the participation of more than 60 countries, in order to contribute to the sixth evaluation report of the IPCC, between January 26, 2020, and February 1, 2020, where the pandemic process has begun but there is no need for online meetings yet [8]. The 52nd Session of the IPCC was also held face-to face in Paris, France, between February 24, 2020 and February 28, 2020. This meeting was the last face-to-face meeting. Then, just like many other meetings, IPCC meetings also was virtually held.

The first remote (online) event of the IPCC during the pandemic period was held as a virtual presentation on May 15, 2020. At this event, the researches, findings and

challenges were conveyed to the scientists by the head of Technical Support Unit Anna Pirani. Furthermore, A European Union Research and Stakeholder Engagement Program, on the development of a new gender policy and implementation plan was presented at this meeting [9]. Eftsoon this event, the 58th Session of the IPCC Bureau, between 19 May 2020 and 20 May 2020, was held on the internet again to avoid disruptions in the work during the pandemic period. Afterward, a series of informal virtual meetings were held in September, October, and November 2020. During the same period, the 59th Session of the IPCC Bureau was held virtually from October 14, 2020, to October 18, 2020. Subsequently, UNFCCC (United Nations Framework Convention on Climate Change) climate change dialogue events were held online between 28 November 2020 and 4 December 2020 with the participation of the IPCC. While the difficulties of the pandemic process continued, between December 7, 2020, and December 14, 2020, the IPCC tried the hybrid format this time and implemented the 53rd Session, where budget issues were discussed, as an electronic and written session. At a time when the power of the Covid-19 Pandemic to prevent face-to-face meetings around the world is increasing, between 12-14 May 2020, the IPCC and IPBES (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services) partnered in London, United Kingdom. The workshop on biodiversity and climate change planned to be held in Turkey had to be postponed to December 2020 due to the epidemic. This postponed workshop could be held virtually between 14-17 December 2020.

When the world entered 2021, the effect of the pandemic was still strong. The first core writing team (CWT-I) meeting of the Sixth Assessment Report (AR6), a synthesis report, was held between 25-29 January 2021. This meeting was held as a virtual event with the participation of 80 authors from 19 countries [10]. After this event, the fourth editorial meeting of the working group was held virtually on 15-19 February 2021 to contribute to AR 6. Following this meeting, the authors of the IPCC Working Group II, which assesses the impacts, adaptation and vulnerability of climate change, met virtually from March 1 to March 12, 2021, based in Guatemala, to draft the final draft of their contribution to AR 6. Soon after, the IPCC Bureau Sixtieth Session was held online from 16-18 March 2021. Between 22-26 March 2021, the 53rd Session of the IPCC was held for the second time (bis) as an electronic and written session. Afterwards, the 54th Session of the IPCC and the 14th Session of Working Group I were held as an electronic session between 26 July and 6 August 2021. Later, the 2nd Meeting of the CWT-2, that is, the Core Writing Team, was held again in virtual format between 16-20 August 2021.

As a result of great efforts by scientists, the Covid-19 vaccine was found and started to be applied in December

2020. With the spread of vaccination after the first few months of 2021, the world gained self-confidence against the pandemic and transitioned to a process of adaptation to the epidemic. Countries that went into full closure have started to take normalization steps. As a result of all these, most of the activities have started to be held in a face-to-face interactive format. The fact that scientific organizations are held in the virtual environment is still partially applied today, as the pandemic still maintains its effect to a certain extent and has some advantages with gaining experience in this regard. When the adaptation process to the pandemic started, the IPCC also started to hold its meetings face-to-face. All these create the opinion that although virtual meetings meet partially the needs, they cannot fully replace face-to-face meetings.

As a result of the normalization process, after a long time, the IPCC held again its first face-to-face meeting in Madrid, Spain, on 27.09.2021. This meeting was held as the official launch of the Interactive Atlas of the Sixth Assessment Report of Working Group I. While the first two events held after this date was created in face-to-face format, a virtual event format was used again. This shows that the transition of virtual activities to a face-to-face environment has taken place somewhat smoothly. After this time frame, several more IPCC events have been held to date. Some of them were done face-to-face, while others were virtually carried out. This shows that the effect of the pandemic continues and that some meetings are still preferred to be held in the virtual environment. This situation also indicates that preferring virtual meetings has some advantages. Table 1, where the activities and their formats are chronologically listed, has been created to more easily observe the progress of the IPCC's work during the pandemic period. The dates given in Table 1 are the start dates of the mentioned activities. As can be easily seen from the table, the IPCC has demonstrated its determination to carry out this process in a healthy way by trying face-to-face, online when necessary, and hybrid methods when necessary, in order not to interrupt the pandemic process, which is a troublesome process.

As of today, the effect of the pandemic period has decreased considerably. Although the pandemic has lost its effect, however, meetings in many areas are still held online, albeit partially, as in the work of the IPCC. This situation further strengthens the opinion that the transition to the virtual environment during the pandemic period has permanently affected the post-pandemic period. In addition, it shows that although virtual meetings were born as a necessity, success was achieved in these meetings and virtual meetings continue to be preferred because they bring some conveniences in terms of both financial and comfort.

In Table 1, a period of approximately two years, from the first day of the pandemic to the days when the pandemic

lost its effect, is taken into account in terms of the historical process. The aim here is to create an opportunity to observe how the impact of the pandemic on IPCC studies has created a trend in the IPCC.

Table 1. IPCC’s Works Process in the Pandemic Period

EVENT NUMBER	EVENT DATE	EVENT LOCATION	EVENT FORMAT
1	01.12.2019	The Emergence of the Covid-19 Virus in Wuhan	
2	02.12.2019	Spain-Madrid	Face-to-Face
3	26.01.2020	Portugal-Faro	Face-to-Face
4	24.02.2020	France-Paris	Face-to-Face
5	15.05.2020	Online	Virtual
6	19.05.2020	Online	Virtual
7	01.09.2020	Online	Virtual
8	14.10.2020	Online	Virtual
9	28.11.2020	Online	Virtual
10	07.12.2020	Hybrid	Electronic and Written
11	14.12.2020	Online	Virtual
12	25.01.2021	Online	Virtual
13	15.02.2021	Online	Virtual
14	01.03.2021	Online	Virtual
15	16.03.2021	Online	Virtual
16	22.03.2021	Hybrid	Electronic and Written
17	26.07.2021	Online	Virtual
18	16.08.2021	Online	Virtual
19	27.09.2021	Spain-Madrid	Face-to-Face
20	31.10.2021	United Kingdom-Glasgow	Face-to-Face
21	09.11.2021	United Kingdom-Glasgow	Face-to-Face
22	06.12.2021	Online	Virtual
23	18.12.2021	Online	Virtual

Within the scope of this study, what kind of changes and innovations the IPCC applied in terms of technique and format to be able to carry out its work in a healthy way despite the difficulties brought by the pandemic during the pandemic period, and to what extent it was successful in all these issues, what were the difficulties it faced in terms of planning and timing, and It is trying to understand how it tries to deal with them. As can be seen from Table 1, virtual and hybrid formats were tried instead of face-to-face meetings during the pandemic period. In terms of time, there was a need for calendar changes in some meetings. These and similar situations are examined in more detail under the next heading.

5. CHALLENGES IN IPCC STUDIES DURING THE PANDEMIC PERIOD AND THE STRATEGIES DEVELOPED BY IPCC AGAINST THESE CHALLENGES

Significant barriers to participation in IPCC's virtual meetings can be mentioned as follows [11].

- 1) domestic and workplace bindings (the two biggest barriers to participation regardless of region and gender),
- 2) difficulties with remote access and limited access to computers (a greater problem for attendees from developing countries),
- 3) the timing of live meetings (the biggest obstacle to participation in regions where the selected time frame is unfavorable) and
- 4) the formation of the dominant group in participation in discussions (difference of barriers to male and female participation)

The IPCC held its first large-scale virtual meeting during the pandemic period as the IPCC Bureau 58th Session on 19-20 May 2020. As can be understood from the report of this session shared by the IPCC, one of the agenda items at the meeting was the update of the sixth assessment report calendar due to Covid-19. In the relevant session, speakers emphasized that it is important to evaluate virtual meeting experiences and consider what can be covered in virtual meetings, what works best in face-to-face meetings, and the role of possible hybrid meetings. In addition, the importance of maintaining the inclusiveness of virtual meetings was mentioned, and it was pointed out that technical problems, which could affect the participation of people from developing countries, could be balanced by avoiding visa and travel problems that could hinder face-to-face meetings. In the same report, it was also stated that Working Group III made an assessment and according to the preliminary findings, there was a higher-than-normal participation from developing countries. However, it has been evaluated that these countries interact more with the relevant IPCC bodies, but that the face-to-face format may still be preferred for some meetings [12]. This situation creates the opinion that there is a natural balance in total participation in the difficulties experienced in attending the IPCC meetings online and face-to-face. At the 58th Session of the IPCC Bureau, one of the assessments made regarding the challenges posed by the pandemic and the solutions considered is that the savings from travel during the year in question could be used to support the telecommunication costs for some participants in the virtual meetings. In addition, it has also been evaluated that there is a risk that the pandemic will cause some governments to reduce or withdraw their contributions. However, it has been pointed out that the COVID-19 pandemic has limited the authors' ability to complete the assessment to the agreed timeline and

required quality for the 6th Assessment Report (AR 6) and that the IPCC management has met several times to review programs under these circumstances. It was also emphasized that a survey of WGII (Working Group II) Lead Authors were conducted in preparing strategies to address the challenges associated with the COVID-19 pandemic to ensure a high-quality outcome while meeting the needs of the author team. As a result, a detailed timeline was created. In the closing parts of this first widely attended meeting of the IPCC during the pandemic period, disagreements arose among the participants because technical limitations affect the efficiency of whether the IPCC's future work should be conducted face-to-face or online. Due to the uncertainties in the current process regarding the epidemic, it was decided to determine this later [12].

IPCC has made available information and documents that are not confidential and that it is safe to share, for the use of IPCC employees, participants, governments, scientists, and relevant parties who want to follow IPCC studies, both before and after the meetings, on the IPCC website. IPCC shares this information and documents through the portal, which can be accessed by entering a password. The IPCC uses a bureau portal in its work, where participants can share their views and reports in writing. This office portal application has been in use since before the pandemic. However, it was concluded that the more active use of this office portal may have made an extra contribution to facilitating the difficulties of the pandemic in terms of providing an opportunity for the exchange of views and communication channels between the IPCC secretariat and the participants, especially before virtual meetings, and it was quite useful.

Another meeting that the IPCC had to revise its planning due to the pandemic is the 59th Session of the IPCC Bureau. This meeting was originally intended to be held in Nairobi, Kenya. However, due to the epidemic conditions, this meeting was also moved to a virtual environment. IPCC Bureau 59th Session, which was held on 13-14 October 2020, was held on the Zoom platform. In this session, whether the chats made through the Zoom chat channel will be shared on the official portal has been brought to the agenda as there may be parts of the chat that may be confidential. At the meeting, it was emphasized that the chats over Zoom should only be related to technical problems and that these chats would not be confidential. Another issue on the agenda is that developing countries have problems accessing the virtual session and this should be emphasized. Whether the meetings should continue in a virtual environment or whether they should be held face-to-face continued to be the subject of discussion among the participants in this session as well. Some participants suggested that due to the Covid-19 pandemic, the IPCC should focus on the completion of the AR 6 cycle, postponing all secondary issues to a later date [13].

It is observed that the fact that the pandemic period caused uncertainties limited many factors as well as IPCC studies, this situation created deep disagreements among the participants in the sessions, and as a result, IPCC governing bodies needed more comprehensive evaluations and studies. In addition, it can be concluded that the option of holding hybrid meetings as a third way has emerged in terms of consensus on whether face-to-face meetings or virtual meetings should be preferred in future studies of the IPCC. As a matter of fact, in the following processes, some important meetings were held as a hybrid with electronic and written options.

Another issue that emerged from the IPCC Bureau's 59th Session report is that, in addition to technical issues, time zones, and capacity building create challenges in virtual meetings that the consequences of all changes should be taken into account, and that a strategic approach is needed in matters of interaction with the Panel. As stated above, it was emphasized that the different periods of the participants should be taken into account in the planning of virtual meetings. Some of the IPCC meetings were spread over a very long time. In particular, approval meetings could go on for days and last until late at night [13]. All these made it necessary to develop common points of harmony (in terms of time) for the planning of time zones, taking into account the local time conditions for all countries, due to the participation of virtual meetings from many parts of the world. At the same time, the different technological possibilities of the large audience included difficulties in holding the meetings with inclusive participation. This problem created imbalances between developing and developed countries in terms of accessibility.

The remote access locations of the parties that will participate in the virtual meetings to be held will be mainly domestic or workplace under pandemic conditions. This situation created some negative conditions both in terms of participation from the workplace and participation from home, and other problems that could arise in terms of applicability for certain bindings to be held healthily.

IPCC working groups and authors have entered into intense virtual meeting traffic to overcome all these problems listed above and to create detailed and maximum compliance timelines. Part of the IPCC's work has also been to carry out outreach activities in all processes. During the pandemic period, it continued to carry out its social assistance activities through virtual environments. The IPCC has chosen to use social media platforms more actively as a communication channel during the pandemic process. It has made the visual elements shared on its platforms more intense. As a result, it is stated in the 59th Session report of the IPCC Bureau that the number of people following the IPCC's social media platform has increased significantly [13].

As can be seen from the 53rd Session report of the IPCC, revisions have been made in the predetermined annual budgets allocated for IPCC studies during the pandemic period to adapt to the process. In addition, it is shown among the decisions taken that the agenda of many different issues that were planned to be discussed in this session was postponed to later times due to the difficulties brought by the pandemic. In addition to these, the issue of hiring temporary personnel to alleviate the increased workload due to the COVID-19 outbreak has also come to the fore [14]. The IPCC has given importance to gender policy in all processes and has worked with great sensitivity to balance the participation of women and men in its work. During the pandemic period, it is expected that there will be significant problems in the participation of women and men in terms of the concept of gender. It can be thought that women and men have different opportunities and conditions regarding their access to IPCC studies due to the differences in their roles in daily life. However, in the reviewed IPCC documents, no specific approach or study on this issue was found.

6. IPCC'S WORKS CONDUCTED AFTER THE PANDEMIC PERIOD

It can be said that the pandemic period did not end completely after 18.12.2021 but started to lose its effect in terms of the difficulties it brought. Again, as it will be understood from the IPCC's official website, after this date, the IPCC organized the Women in Science Climate Event on 11.02.2022. This event was held online. As can be seen, despite the disappearance of the difficulties brought on by the pandemic, the IPCC continued its online activities. This shows that the advantages of online activities continue to be used. The events of the Fifty-Fifth Session of the IPCC (IPCC-55) and the Twelfth Session of the Working Group II (WGII-12), held between February 14, 2022, and February 25, 2022, were also held as electronic sessions. Then, the Fifty-sixth Session of the IPCC and Fourteenth Session of Working Group III meetings were held electronically between March 21, 2022–April 4, 2022. As can be seen, even large and important meetings were held in the electronic environment on these dates. However, the Third Core Writing Team Meeting of the AR6 Synthesis Report was held in Dublin, Ireland, April 25, 2022–April 28, 2022. This may indicate that a balance has been reached in the choice of virtual or face-to-face meetings, and the meeting format is chosen according to need and efficiency. Along with it, the University of Exeter event on Diversity and Inclusion in the IPCC was held online again on April 28, 2022. Sometime after this event, the IPCC participated in the climate conference held in Bonn, Germany between June 6, 2022–June 16, 2022. As observed, after the pandemic, the IPCC preferred virtual or face-to-face events depending on the conditions, and the hybrid method was not needed much in these periods. Afterward, the IPCC participated in the International Women's Forum event in Berlin, Germany, on 20 June

2022–21 June 2022, supporting our opinion that the IPCC is sensitive to gender issues outside the pandemic period. As can be seen, this activity was carried out face to face. On September 27, 2022–September 30, 2022, the Fifty-Seventh Session of the IPCC, which is one of the main meetings that require broad participation, was held face-to-face in Geneva, Switzerland. As can be seen, in this period, the face-to-face format was preferred for meetings that require important and broad participation. This may lead to the opinion that a face-to-face format is a more efficient method for large-scale meetings, rather than a virtual environment. As of now, Interactive Atlas Regional Webinars, the last event of today's IPCC, was held virtually on October 6, 2022. This shows that, as of today, the IPCC makes choices in meeting format selection based on criteria such as needs, conditions, convenience, and efficiency, away from the anxiety of the pandemic. Table 2, it is aimed to observe more clearly what kind of a tendency the IPCC has in choosing the meeting format during the period when the pandemic lost its effect. The dates given in Table 2 are the start dates of the mentioned activities as in Table 1. As mentioned before and it can be seen more easily from Table 2, the hybrid method was not preferred during the period when the pandemic lost its effect. However, the online format continued to be preferred according to the conditions.

Table 2. IPCC's Works Process after the Pandemic Period

EVENT NUMBER	EVENT DATE	EVENT LOCATION	EVENT FORMAT
1	11.02.2022	Online	Virtual
2	14.02.2022	Online	Virtual
3	21.03.2022	Online	Virtual
4	25.04.2022	Dublin-Ireland	Face-to-Face
5	28.04.2022	Online	Virtual
6	06.06.2022	Bonn-Germany	Face-to-Face
7	20.06.2022	Berlin-Germany	Face-to-Face
8	27.09.2022	Geneva-Switzerland	Face-to-Face
9	06.10.2022	Online	Virtual

Before the pandemic period, almost all of the meetings held by the IPCC were held face-to-face. Table 1 shows the formats of the activities held during the pandemic period and Table 2 in the post-pandemic period. As can be seen from Table 1 and Table 2, the face-to-face format used before the pandemic period has left its place in virtual and hybrid methods to a large extent during and after the pandemic period.

7. CONCLUSIONS AND RECOMMENDATIONS

It is seen that the IPCC makes intensive and detailed evaluations to carry out its work in a healthy way in response to the negative situations brought by the

pandemic. As a result of this study, it can be concluded that:

1) Successful interactions were achieved by using face-to-face, online when necessary, and hybrid meeting techniques when necessary.

2) The IPCC created detailed schedules for meetings spread over a long period, made revisions in financial matters, and made use of more frequent and superior technology to carry out virtual and hybrid events without any problems.

3) In the first virtual meetings held during the periods when the pandemic affected face-to-face meetings, effective discussions were made on the next process.

4) In addition to all these, although it is considered that the IPCC is successful in the management of the process in general, the only issue that can be criticized is the lack of sufficient effort on the issue of gender, which is generally highly sensitive.

5) Virtual meetings can create effective solutions in special processes such as pandemics, and hybrid methods can be tried in cases where this is insufficient.

6) On the other hand, detailed plans can be made to eliminate the opportunities of the participants and other obstacles such as local time regarding participation in online meetings. In addition, it can be said that technological infrastructure and opportunities can be developed. Within the scope of this research, as one of the most important issues, it is recommended to establish local working groups, strengthen the existing ones, increase their powers, and give them more initiative.

7) Continuing online meetings after the pandemic period indicates that an infrastructure has been formed in this regard and this can be considered as an achievement of the pandemic.

8) Face-to-face events will have financially significant expenses such as travel, visa, accommodation, and meeting expenses, so virtual events will be more economically advantageous and this can be one of the positive aspects of virtual organizations.

9) Different methods and strategies can be developed, virtual and hybrid methods can be used, timely planning can be made, and wide participation in meetings can be ensured to carry out organizations with large participation in a healthy way in special cases such as pandemics.

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