



CIAO

Ground Rules

Version 4.3

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This document describes the ground rules governing the CIAO knowledge community.

Document history:

<i>Version</i>	<i>Milestone</i>	<i>Until</i>
Versions 1-3	Drafted by individual coordination group members	2021-08-18
Version 4	Shared with the coordination group, last comments	2021-09-02
Version 4.1-4.2	After 2021-09-02/03 discussions in the coordination group	2021-09-07
Version 4.3	Agreed by the coordination group and presented to the CIAO crowd	2021-09...

CIAO MISSION STATEMENT

CIAO is part of the global effort to address the COVID-19 pandemic by delivering knowledge depicting complex COVID-19 disease processes in an understandable way.

1. INTRODUCTION

The CIAO project delivers knowledge modelling the pathogenesis of CCOVIDID-19 using the Adverse Outcome Pathway Framework.

CIAO is a collaborative cross-disciplinary international project based on the crowdsourcing principle. Its members identify, review, organise, prioritize and disseminate COVID-19-related knowledge.

The aspiration is that the CIAO crowd is a welcoming, safe and productive space for collaboration. CIAO provides a forum enabling scientists to contribute their specific expertise in topics relevant to COVID-19.

This document establishes the ground rules of the CIAO project.

- CIAO embraces diversity and promotes non-discrimination. It welcomes people with relevant scientific or professional background from all over the world to join the CIAO crowd.
- CIAO focuses on knowledge related to COVID-19. Any aspect influencing the disease is of interest. CIAO is about highlighting scientific facts and interdependencies between them. CIAO does not explore the role that particular individuals, governments, agencies or organisations play in the pandemic.
- CIAO knowledge is *created* by the CIAO crowd, which for practical reasons can be organised in working groups (WG) dealing with specific topics; a coordination group facilitates the overarching collaboration.
- CIAO *delivers* knowledge primarily via the AOP-Wiki and potentially via peer-reviewed journals. AOP-Wiki teams and publication teams take care of this knowledge dissemination.
- Twice per year at least, a CIAO workshop is organised, in which progress is reported by the crowd, and the scientific topics to explore until the next workshop are agreed upon. A workshop report summarises all decisions taken at the workshop.
- The coordination group facilitates the implementation of workshop decisions, through discussion, consensus and where appropriate, a vote.
- In case of conflicts within the CIAO project, the coordination group establishes a panel to address the issue.

2. THE AOP FRAMEWORK

An AOP describes a sequence of events commencing with initial interaction(s) of a stressor within an organism that causes a perturbation in its biology (i.e., molecular initiating event, MIE), which can progress through a dependent series of intermediate key events (KEs) and culminate in an adverse outcome (AO) considered relevant to risk assessment or regulatory decision-making. AOPs are typically represented sequentially, moving from one KE to another. In this respect, AOPs define a series of measurable biological changes that can be expected to occur if the perturbation is sufficiently severe (i.e., in terms of potency, duration, frequency) to drive the pathway all the way to the AO. Importantly, AOPs do not describe every detail of the biology but instead focus on describing critical steps or check-points along the path to adversity, which are both measurable and have potential predictive value. While the focus of AOP development is to capture and organise what is known, the process of AOP development may also identify current knowledge gaps which, if filled, could further improve predictive utility.

The AOP framework was adopted by the OECD in 2012 to address primarily pathways of toxicity triggered by chemicals and apply this organised knowledge for risk assessment purposes. Since then the AOP framework was used to capture mechanistic knowledge related to nanomaterials, radiation and more recently was applied for both communicative and not communicative diseases. AOP descriptions developed as part of the OECD AOP Development Programme are peer-reviewed as per procedures outlined by the OECD. The CIAO project is in the process of submitting a project proposal to the OECD AOP Development Programme, and once this proposal is adopted by the OECD, CIAO AOPs can be subjected to the OECD peer review.

3. CIAO GOALS, SCOPE, ETHOS AND BRAND

3.1. Goals and scope

CIAO assembles and delivers organised and curated knowledge that

- supports parties who want to better understand the pathogenesis and disease stages of COVID-19, including modulating and other influencing factors. In this context, CIAO focuses on scientific knowledge related to COVID-19 - but does not explore the role that particular individuals, governments, agencies or organisations play in the pandemic,
- supports parties who want to extend the AOP Framework to the biomedical domain, i.e. beyond its toxicological origins. The CIAO project can be seen as a pilot experience on that meta level.

CIAO provides this knowledge free of charge¹ via various public channels (sections 5.4.2 and 6).

¹ The usual access fees to the internet and/or journals apply

3.2. Ethos

CIAO aims to build up a knowledge base about COVID-19 that can be referred to by a wide variety of stakeholders in research, in medical practice, in the development of treatments, and in policy formation. Our value is in aggregating knowledge from diverse sources, in a way that is readily accessible and understandable by the affected stakeholders. We believe that crowdsourcing is a good way to go about this, drawing on collective knowledge about different aspects of COVID-19 dispersed in many different contexts. This means that we do not exclude anyone from the crowd, so long as they have relevant knowledge and expertise. At the same time, we are a community who freely and openly review and critique each other's knowledge.

With respect to quality control,

- for AOPs developed in the AOP-Wiki and included in the OECD AOP Development Programme, the peer-review is performed according to the procedures outlined by the OECD;
- when going forward to publication, we draw on traditional peer review as defined by the scientific journals.

All contributors and their institutional affiliations are clearly stated.

In these ways, we aim to achieve the highest standards in the quality of our knowledge outputs, and in transparency.

3.3. Brand

CIAO is not aligned with any particular advocacy or lobby group, organisation, institution or industry, and the "CIAO brand" (section 3.3) cannot be used to suggest such alignments.

"Using the CIAO brand" means:

- Claiming an association between a deliverable and the CIAO project
- and/or
- using any of the brand elements in a deliverable:
 - The name "CIAO" as acronym for *Modelling the pathogenesis of COVID 19 using the Adverse Outcome Pathway Framework*
 - The CIAO logo: the visual trademark that identifies a brand
 - The CIAO visuals, diagrams and symbols



Deliverables using CIAO knowledge can use the CIAO brand only if the conditions laid out in section 6.1.2 **are fulfilled**.

4. CIAO STAKEHOLDERS

Figure 1 gives an overview of the CIAO stakeholders:

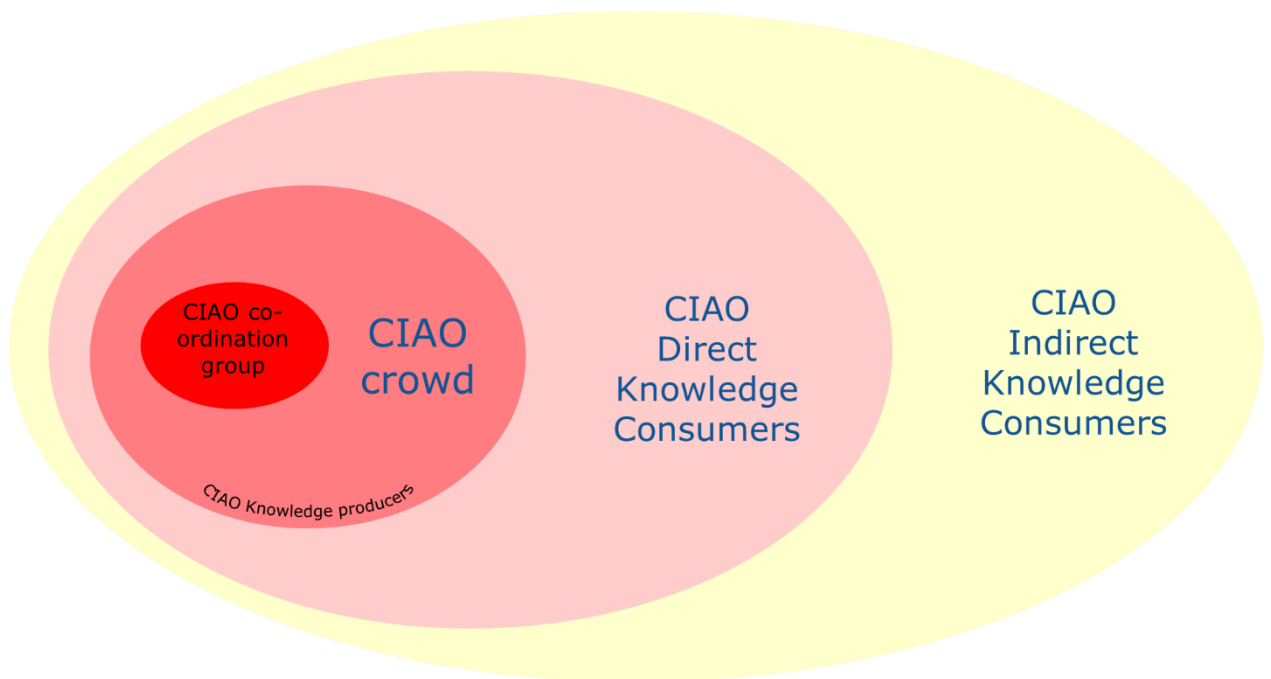


Figure 1 - CIAO stakeholders

4.1. CIAO knowledge producers

The CIAO knowledge producers are responsible for the management, facilitation, steering and execution of the project. They collaborate in goal setting and goal accomplishment.

CIAO knowledge producers are:

- Members of the CIAO coordination group (section 5.2),
- Members of the CIAO crowd (section 5.1).

4.2. Direct CIAO knowledge consumers

Direct CIAO knowledge consumers are parties who can use CIAO deliverables, such as (but not limited to):

- The scientific community working in COVID-19 research,
- Health care providers profiting from CIAO-derived insights,
- Public Health actors like national and international agencies, aid agencies, regional organizations and economic unions, as well as non-governmental organizations, humanitarian and religious agencies, contract providers, government technical agencies and research institutions, philanthropic foundations, global health and development

think tanks, advocacy groups and alliances, social and political movements, when using CIAO findings plan on operational and strategic levels

- Pharmaceutical industry gaining useful insight by studying CIAO deliverables, e.g. for re-purposing existing drugs,
- Population epidemiologists when using CIAO knowledge for their models and predictions,
- Scientists outside the COVID-19 domain who profit from CIAO knowledge delivered in the AOP-Wiki which can be reused as appropriate,
- Policy makers basing their decisions on CIAO findings,
- Members of the general public who are interested in curated and reliable COVID-19-related knowledge

Input from direct CIAO knowledge consumers is sought to improve CIAO goal setting and their accomplishment.

4.3. Indirect CIAO knowledge consumers

Indirect CIAO knowledge consumers are parties who profit when direct CIAO knowledge consumers use CIAO deliverables:

- Patients
- General public

5. CIAO GOVERNANCE

Figure 2 shows a high-level overview of individual CIAO elements, and how they work together.

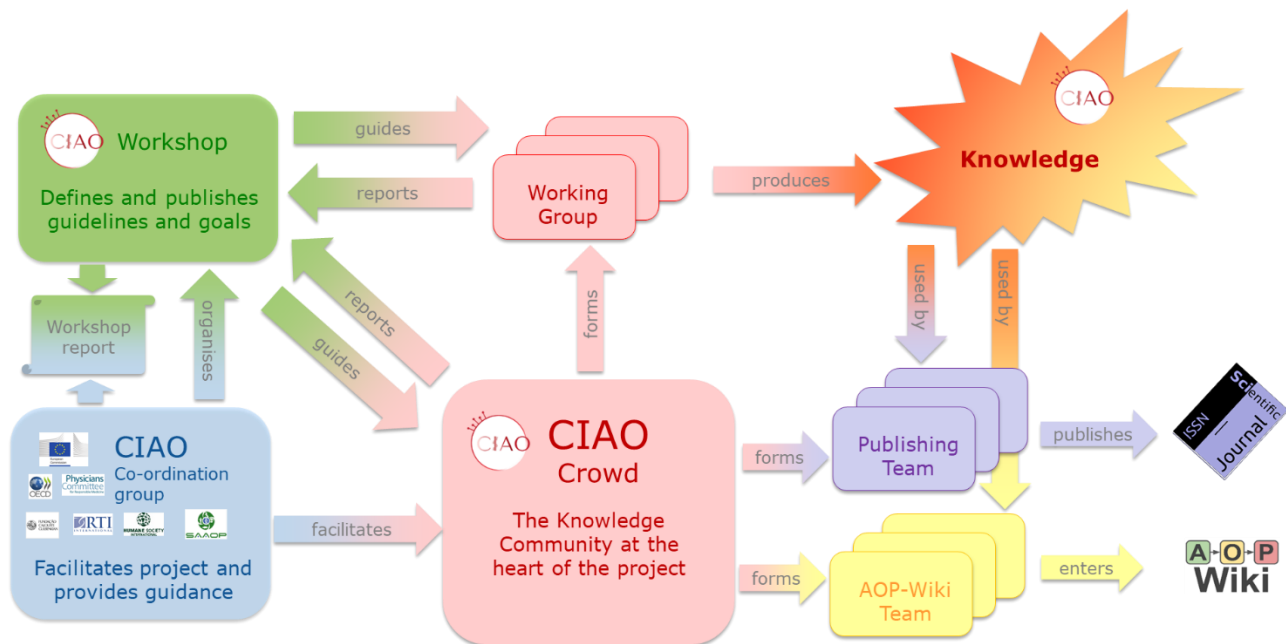


Figure 2 - CIAO governance

The **CIAO crowd** (section 5.1) is the knowledge community at the heart of the project. It forms **working groups** (section 5.1.3) in which the actual scientific work of CIAO is executed, i.e. retrieval, review, assessment, arrangement and ultimately dissemination of the **CIAO knowledge**. In periodic **CIAO workshops** (section 5.2), the knowledge is presented and discussed, and the next steps are planned. The findings and decisions of the workshop are recorded in a **workshop report** (section 5.3.3), which is prepared by the **CIAO coordination group** (section 5.2). The coordination group facilitates the work of the CIAO crowd, provides guidance and takes definitive decisions when needed. The CIAO crowd also forms **publication teams** (section 6.2) and **AOP-Wiki teams** (section 6.3) which - based on the CIAO knowledge - co-author **journal papers** or jointly enter knowledge into the **AOP-Wiki**.

The language used in CIAO meetings, workshops, webinars, publications, information material *etc.* is **English**.

5.1. The CIAO crowd

The CIAO crowd is the Knowledge Community at the heart of the project.

5.1.1. Tasks and way of working

From Wikipedia:

“**Crowdsourcing** is a sourcing model in which individuals or organizations obtain goods or services, including ideas, voting, micro-tasks and finances, from a large, relatively open and often rapidly evolving group of participants. [...] crowdsourcing typically involves using the internet to attract and divide work between participants to achieve a cumulative result. [...] Crowdsourcing is not necessarily an "online" activity; it existed before Internet access became a household commodity.”

CIAO is based on crowdsourcing, i.e. the collection, review, processing, prioritisation, dissemination and management of CIAO-related COVID-19 knowledge is distributed over a large group of volunteers, the CIAO crowd.

The CIAO crowd is a largely self-organising assembly of people which implements the findings and decisions taken at the CIAO workshops (section 5.2). For practical reasons, the CIAO crowd can form WGs (section 5.1.3) in which the work is distributed based on the topic. In case of issues that cannot be properly addressed or resolved via WG self-organisation, the CIAO coordination group provides guidance.

CIAO crowd members can have different and varying levels of attachment to the project. Typical roles are (non-exhaustive):

- WG scientific coordinator (high level of attachment)
- Knowledge collector, reviewer and processor (high to medium level of attachment)
- Ad-hoc Expert (low level of attachment)

5.1.2. *CIAO crowd members*

5.1.2.1. Outreach and signalling of interest

Crowdsourcing implies the continuous outreach to the stakeholder community to attract more members to the crowd. Everyone in the crowd is therefore welcome to reach out to individuals they consider as “CIAO prospects”.

Organised and coordinated outreach via the CIAO website, CIAO webinars or other channels (section 5.4.2 **Error! Reference source not found.**) complement the spontaneous identification of CIAO prospects.

5.1.2.2. Eligibility criteria

Every person wishing to become member of the CIAO crowd is eligible as long as they have the scientific or professional education and experience that lets expect a meaningful contribution to the project.

CIAO welcomes diversity, and will not discriminate on the basis of sex, gender (re)assignment, race, colour, ethnic or social origin, nationality, genetic features, religion or belief, property, disability, age or sexual orientation.

The language used in CIAO being English, meaningful contributions might only be possible by individuals that master the English language to certain degree.

5.1.2.3. Professional affiliation and conflict of interest

Professional affiliation of any kind (or lack thereof) is not considered an obstacle to becoming a member of the CIAO crowd.

In order to avoid any conflict of interest:

- Every CIAO crowd member is obliged to be fully transparent about their affiliation;
- Every CIAO crowd member fully discloses their potential conflict of interest – especially if they become member of a publication or an AOP-Wiki team (section 6.2.2 and 6.3);
- The publication and AOP-Wiki teams carefully review their deliverables for any potential misrepresentation of scientific facts, ideally by requesting additional review from the CIAO crowd.

5.1.2.4. Becoming a CIAO member

The CIAO project aims to be as inclusive as possible. A person becomes a member by indicating their interest to a member of the coordination group, and a quick discussion will determine whether there is a fit. This will take into account the person's scientific and/or professional background and the aims of the project. Subsequent to that discussion, the member of the coordination group will make a recommendation to the rest of the coordination group. The final decision rests with the coordination group.

By joining the CIAO crowd, the new CIAO crowd member acknowledges the ground rules laid out in this document. Membership to the CIAO crowd will be confirmed upon completion of the [consent form](#) which is required for GDPR compliance, and which also features a Conflict of Interest clause.

Once everything is in place, the coordination group will issue a statement to the entire CIAO crowd, informing them about the new member; this statement will also signal potential conflicts of interest.

5.1.2.5. Withdrawing from the CIAO crowd

A CIAO member can at any time decide to leave the project, by informing any member of the coordination group. In that case, CIAO is entitled to further use the knowledge co-produced by the ex-member, and the ex-member is entitled to base their non-CIAO work on knowledge they became aware of during their CIAO involvement. All further re-use of CIAO-generated knowledge must acknowledge the source.

5.1.2.6. CIAO crowd member list

The coordination group manages a publicly accessible list of all CIAO crowd members. The list features:

- Membership (yes/no) to the CIAO coordination group
- Name
- Affiliation
- Conflict of interest, if applicable

- Date of addition to the list (section 5.1.2.4)
- Date of withdrawal from the CIAO crowd (section 5.1.2.5 or 5.1.2.8)

The list is accessible [here](#).

5.1.2.7. Duties and rights of a CIAO crowd member

Every CIAO crowd member aims to support the project by dedicating their time and skills to the identification, review, organisation, dissemination and management of COVID-19-related knowledge following the rules laid out in this document.

No financial compensation is foreseen for time and skills dedicated to the project. A CIAO crowd member is associated with the project in their personal capacity, and no relationship whatsoever is established between the CIAO project and the organisation(s) a CIAO crowd member might be affiliated with. Arrangements a CIAO crowd member makes with their affiliation (e.g. employer) to be allowed or mandated to dedicate time and skills to CIAO are between the member and their employer, and beyond the remit or purview of CIAO.

Every CIAO crowd member has the right to openly communicate to any third party about their involvement in CIAO.

CIAO has the right to publish information about the individuals (name, affiliation) that are members of the CIAO crowd, as acknowledged in the consent form, e.g. in the CIAO crowd member list (section 5.1.2.6)

5.1.2.8. Exclusion from the CIAO crowd

In the case of repeated non-observance of the rules laid out in this document, the coordination group can decide to exclude an individual from the CIAO crowd. In that case, CIAO is entitled to further use the knowledge co-produced by the ex-member, and the ex-member is entitled to base their future non-CIAO work on knowledge they became aware of during their CIAO involvement.

5.1.3. Working groups (WGs)

5.1.3.1. Working group purpose

The CIAO crowd can form WGs to better manage its work, focusing on defined topics.

WGs prepare the scientific knowledge necessary to produce a CIAO deliverable (section 6), but they are *per se* not the “authors” of such a deliverable. “Publishing teams” (section 6.2) and “AOP-Wiki teams” (section 6.3) can form in parallel to the WGs, and they will profit from the knowledge gathered in the WGs.

5.1.3.2. Working group formation

In most cases, WGs form following the decisions taken in a CIAO workshop (section 5.2). However, more WGs can be formed, or WGs can be disbanded as necessary even before the following CIAO workshop. In its first meeting, a WG

- agrees on the goals it aims to accomplish.
- nominates its WG scientific coordinator (section 5.1.3.4),

In case of conflicts about WG formation, the coordination group will provide guidance and ultimately take decisions if needed.

Every CIAO crowd member has the right to become a member of any CIAO WG.

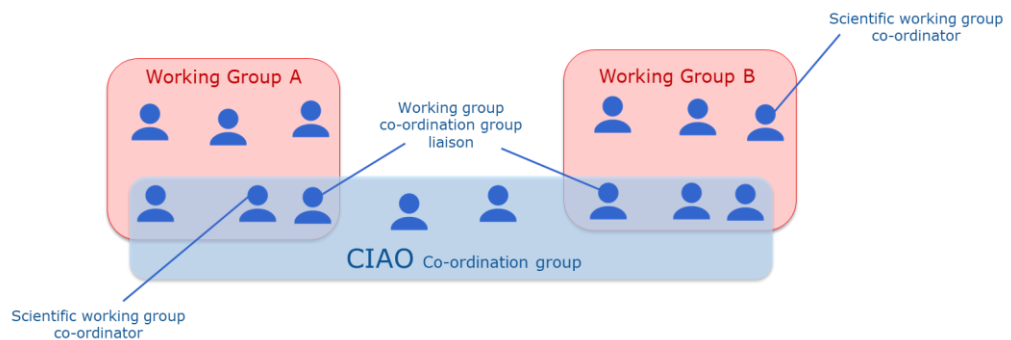


Figure 3 - Working group members

5.1.3.3. Working group coordination group liaison

The coordination group delegates one member to each WG who acts as liaison between the WG and coordination group. This person ensures that there is a coherence in the whole project, a continuous information flow between coordination group and WGs, and that the WG participates in decisions made by the coordination group.

5.1.3.4. Working group scientific coordinator

The WG scientific coordinator calls for WG meetings, prepares the meeting agenda, monitors progress and aims at resolving any issues that may arise, in discussion with the coordination group. The WG scientific coordinator can be but must not necessarily be a member of the coordination group.

5.1.3.5. Working group meetings

WG meetings are organised at intervals agreed with the WG members. Typical agenda items of WG meetings are: report from the coordination group, work progress, next steps etc.

5.2. The CIAO coordination group

The CIAO coordination group facilitates the collaboration and coordination of the project, provides guidance and takes final decisions where necessary.

5.2.1. Tasks and way of working

The CIAO coordination group facilitates the project by

- Supporting the alignment of CIAO goals by fostering communication within the crowd and between WG,
- Organising the CIAO workshops (section 5.1.3),
- Drafting and potentially publishing the workshop report,
- Planning and facilitating activities to promote CIAO deliverables,
- Pro-actively developing and suggesting ideas to move the project towards its goals,
- Following up on the implementation of such ideas once agreed with the crowd,
- Managing the CIAO conflict resolution process (section 5.5)
- Deciding about the use of the “CIAO brand” in case of doubts.

5.2.2. Coordination group members

The coordination group consists of

- Its members when the project was instigated, before the crowdsourcing process was started,
- Coordination group liaison from each WG (see 5.1.3.3.),
- Others with specific expertise brought in on an ad hoc basis, following invitation by the coordination group

The co-ordination group may develop its own rules for its internal purposes.

Members of the coordination group are indicated in the public CIAO crowd member list (section 5.1.2.6)

5.3. The CIAO workshop

The CIAO workshop aims to share and discuss the WG results within the crowd, develops and publishes the scientific guidelines and goals to be implemented in the project.

5.3.1. Purpose and attendance

The CIAO workshop is the central scientific guideline issuing entity in CIAO, and it defines the project overall direction and priorities. A CIAO workshop is held twice per year (at least). It assembles all CIAO crowd members.

CIAO workshops are in principle not open to the public, but non-CIAO-crowd members can be invited as guests and observers on a case-by-case basis, especially potential CIAO members who want to know more about the project.

CIAO workshops are not to be confused with CIAO webinars (section 5.4.2.1), which are targeted at a broader public.

5.3.2. Preparation and execution

A CIAO workshop is prepared by the coordination group in close collaboration with the WGs. Typical agenda items are:

- Introduction of new CIAO crowd members
- WG results
- CIAO deliverables: planned, ongoing, finished
- Next scientific CIAO goals
- How to accomplish these goals (WG formation, WG goal definition, ...)
- Updates to the CIAO ground rules (only if necessary)

5.3.3. Workshop report

After a CIAO workshop, a workshop report is written. The editing process is managed by the coordination team and members of the CIAO crowd might be invited to contribute.

The CIAO workshop report will feature a summary of the presentations, discussions, findings and decisions, and it is distributed among all CIAO crowd members. Once final, its decisions govern the scientific work of CIAO until the subsequent workshop.

A CIAO workshop report can also be used as the basis for a journal publication, section 6.2.4.

5.4. The CIAO communication

5.4.1. Within CIAO

5.4.1.1. Free, open and uncensored talk

Every member of the CIAO crowd has the right to speak within the crowd about any relevant issue in workshops, in WG meetings, in informal gatherings and via

electronic channels. No relevant topic, opinion or content is off-limits, as long as it is presented in an honest, comprehensible, respectful and friendly manner. Repeated cases of misinformation, incendiary talk, off-topic digression or similar behaviour disrupting collaboration can lead to exclusion from the CIAO crowd (see also section 5.1.2).

5.4.1.2. CIAO newsletter

The coordination group nominates a newsletter editor and issues a periodic newsletter, which updates all members about scientific or organisational details relevant to all.

The WG scientific coordinators (or WG coordination group liaison) deliver newsworthy items to the editor of the newsletter or communicate that nothing newsworthy has happened since the last edition. The editor decides which items to include in the newsletter.

5.4.2. *Outside CIAO*

5.4.2.1. CIAO webinars

CIAO organises CIAO webinars which target

- potential new CIAO members (section 5.1.2.1)
- direct CIAO knowledge consumers (section 4.2)
- indirect CIAO knowledge consumers (section 4.3)

CIAO webinars are organised by the CIAO coordination group in close collaboration with the WG and/or third parties, depending on the webinar topic.

CIAO webinars disseminate the current state of CIAO knowledge, as agreed within the WGs.

5.4.2.2. CIAO website

CIAO maintains a public website at <https://ciao-covid.net>. The coordination group nominates a webmaster who is responsible for publishing relevant and updated content.

5.4.2.3. CIAO on social media

CIAO runs a Twitter account (@CiaoCovid). The coordination group nominates a coordination group member who manages and monitors the account.

All CIAO members are invited to follow this account and to pro-actively promote the CIAO project with their own Twitter or other social media accounts (LinkedIn etc.)

5.4.2.4. CIAO e-mail address

CIAO has an e-mail address (covid.ciao@gmail.com). The coordination group nominates a CIAO member who manages and monitors the account.

5.4.2.5. CIAO related communication via local channels

All CIAO members are welcome to disseminate CIAO knowledge via their local channels, their local websites etc.

5.5. The CIAO conflict resolution process

CIAO acknowledges that within its scope, conflicts can arise, e.g., when:

- there are scientific or professional disputes between crowd members;
- a crowd member has the impression that an issue is in contrast to rules they consented to when joining the project;
- a crowd member identifies an undisclosed conflict of interest.

Figure 4 on page 19 shows a diagram of the CIAO conflict resolution process. Sections 5.5.1 to 5.5.7 describe the same process.

5.5.1. *Process invocation*

The CIAO conflict resolution process can be invoked by any member of the CIAO crowd by informing the coordination group of the issue. No special format is required.

5.5.2. *Preliminary problem description*

The coordination group, together with the affected crowd member(s) draft the preliminary problem description, which features:

- Verbal description of the problem
- Enumeration of various resolution options

5.5.3. *Preliminary panel*

The coordination group then nominates a preliminary panel, which it charges with the execution of the further steps. The preliminary panel should consist of representatives of all identified resolution options. If applicable, it invites further members and thereby forms the definitive conflict resolution panel.

5.5.4. *Conflict resolution panel*

The conflict resolution panel should consist of representatives of all identified resolution options. The conflict resolution panel has an uneven number of members and one member is explicitly neutral. The neutral member can also be nominated from outside the crowd.

5.5.5. Agreed problem definition

In parallel, the conflict resolution panel drafts the agreed problem description, which features:

- Verbal description of the problem
- Enumeration of various resolution options

5.5.6. Conflict solution

The conflict resolution panel develops a conflict solution. It votes on the solution and adopts the solution with simple majority. It then communicates this solution to the crowd, which implements it.

5.5.7. Solution check

Once the solution has been implemented, its success in addressing the issue, and its acceptance by all members continues to be monitored. If necessary, the solution is refined, until such time as the conflict is considered solved. The conflict resolution panel finishes the process by issuing a conflict resolution report.

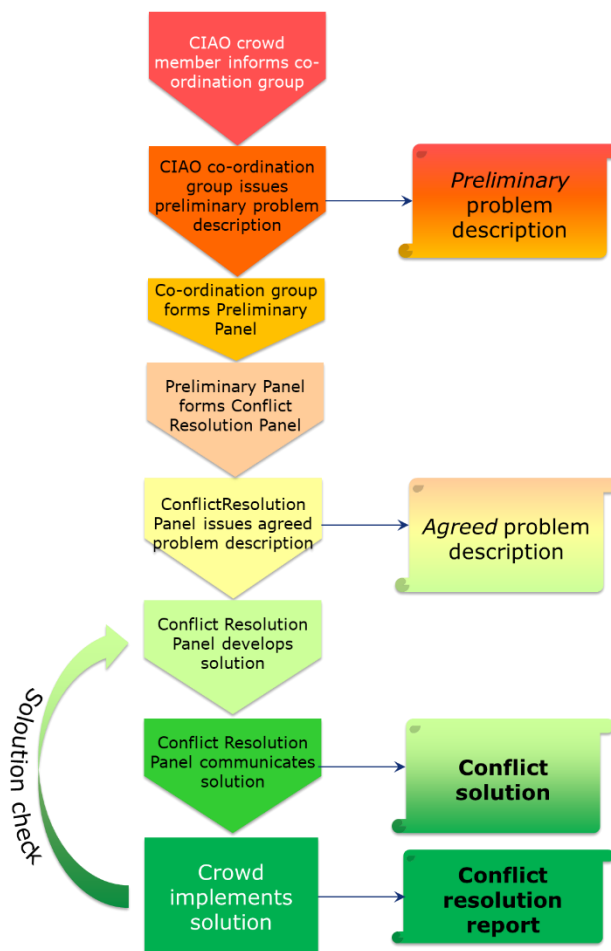


Figure 4 - CIAO conflict resolution process

6. CIAO DELIVERABLES

6.1. Deliverables

6.1.1. *Types of Deliverables*

CIAO delivers organised and curated knowledge. In addition to the channels laid out in section 5.4.2 (website, webinars, ...), this knowledge is published:

- As entries in the AOP-Wiki (<https://aopwiki.org/>)
- As peer-reviewed journal articles

Every member of the CIAO crowd is entitled to publish material related to knowledge sourced within the CIAO project. Members of the crowd form spontaneous journal publication teams (with the aim of co-authoring a peer-reviewed journal article) or AOP-Wiki teams (with the aim of entering material into the Wiki together).

6.1.2. *Distinction between CIAO and non-CIAO deliverables*

All deliverables are CIAO deliverables and can use the CIAO brand, if

- the topic of the deliverable supports the goals and scope of CIAO (section 3.1),
- the deliverable team consists mainly of CIAO crowd members,
- CIAO and its role are explicitly acknowledged in the deliverable
- the coordination group has given explicit consent for the branding to be used

In addition, CIAO members can decide to publish additional deliverables that do not fulfil the four conditions. These deliverables are then not CIAO deliverables and cannot use the CIAO brand, but the CIAO project should be acknowledged.

6.2. Journal publications

6.2.1. *Aim and purpose of CIAO journal publications*

Publishing material related to knowledge generated in the CIAO project in peer reviewed journals is the classical way to reach a research audience and earn recognition under the current reward paradigm in science.

6.2.2. *Publication teams*

Parallel to the CIAO WGs (section 5.1.3), publication teams can form with the aim to co-author a peer-reviewed journal article. These teams are typically facilitated by the individual that acts as lead author of the article. The teams themselves decide on who takes part and who consequently becomes co-author of the specific paper. All potential co-authors have to consider conflict of interest

statements before beginning to work on a publication. Working on a publication presumes that each individual agrees with the co-authorship.

6.2.3. *Possible scientific CIAO publications*

The following publications are envisaged (non-exhaustive list):

- The COVID-19 AOP network paper – the master paper describing the overall scientific outcomes of CIAO integrating the AOPs developed within the project,
- The AOP-Framework and CIAO meta-level paper – describing the way the AOP Framework was used to depict a viral disease based on a crowdsourcing approach, what went well, what went wrong, and how solutions were found,
- Various sectorial papers, zooming into specific COVID-19-related topics.

Each of these papers have their own independent publication teams.

6.2.4. *CIAO workshop reports*

As mentioned in section 5.3.3, CIAO workshops result in a workshop report, which is in principle an internal document.

However, the workshop report can also be basis for a publication in an appropriate journal. In that case, the publishing team consists of the coordination group members and CIAO crowd members who have made a substantial contribution to the report. However, all workshop participants will be explicitly mentioned (including affiliations) in the report.

6.3. **AOP-Wiki entries**

6.3.1. *Aim and purpose of AOP-Wiki entries associated to CIAO*

Adding content to the official, OECD-endorsed AOP knowledge base - the AOP-Wiki (<https://aopwiki.org/>) - is the recommended way to disseminate CIAO knowledge. By entering CIAO knowledge into the AOP-Wiki, it becomes part of a vast AOP network that is continuously improved and augmented by numerous parties far beyond the CIAO project.

The CIAO project is on its way to becoming an integral part of the OECD work plan for the AOP Framework², and CIAO will receive “1.96” as official project number on that work plan.

Being associated with CIAO almost automatically qualifies an individual to get AOP-Wiki author privileges and coaching.

² <https://www.oecd.org/chemicalsafety/testing/projects-adverse-outcome-pathways.htm>

6.3.2. *Types of AOP-Wiki entries*

6.3.2.1. AOPs

AOPs instigated by CIAO are entered into the Wiki by a CIAO AOP-Wiki team.

Once an AOP has been entered into the Wiki, a request can be sent to OECD to associate the AOP with the OECD work plan CIAO project number 1.96.

Once that link is established, the AOP will be subjected to the official OECD review and endorsement process, which is independent from CIAO rules, as it follows the OECD procedures. Once the OECD review starts, the relevant CIAO AOP-Wiki team is responsible to lead the AOP through the process.

6.3.2.2. KEs and KERs

In the AOP-KB, authorship for AOP elements (KEs and KERs) is not explicitly acknowledged. The AOP-Wiki team responsible for the entry (or the addition to an already existing entry) therefore donates the knowledge to the AOP stakeholder community.

6.4. **Other material**

Other channels of publication can be popular science periodicals, CIAO crowd members' websites (e.g. the European Commission [Science Hub](#)), etc.

7. **ABOUT THIS DOCUMENT**

7.1. **Scope of this document**

This document constitutes the rules that govern the collaboration of the CIAO crowd. In order to become a member of the CIAO crowd, an individual has to explicitly acknowledge this document and their willingness to observe the rules (section 5.1.2.4).

7.2. **Validity of this document**

The latest and valid version of this document is always available online at this URL: <https://www.ciao-covid.net/groundrules>

The procedure to change this document is as follows:

- The CIAO coordination group explicitly decides to adapt the document.
- The CIAO coordination group informs all CIAO members of these changes via e-mail and by publishing the new version at the above-mentioned URL.

- Once the updated rules are published, members can revoke their CIAO crowd membership within seven days. If we do not hear from members within this time period, we will assume that the modified rules are accepted by the members.