



Conflict Prevention and Management Systems in Collaborative Research Projects

A guide for design and implementation

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„It will require the commitment of scientists and scientific methods throughout the world ... to bring the benefits of science to all.“

Kofi Annan's words have lost none of their significance and validity. The German Federal Ministry of Education and Research (BMBF) and the German Federal Ministry for Economic Cooperation and Development (BMZ) therefore specifically support also research projects at the interface between research, development cooperation and society. Several aspects are characteristic of such research projects: they are designed and executed by larger research consortia; they are interdisciplinary in their approach and require close cooperation and exchange between international researchers; and they include the intensive participation of local population expert groups in a transdisciplinary approach. This characterization alone indicates the complexity of such research projects. Situations involving challenging decisions and even severe conflict that can delay or threaten the successful conclusion of the project can easily arise. To prevent this from happening, innovative concepts for the coordination of large collaborative projects are needed.

The publication at hand focuses on one such innovative concept: the development and implementation of a system for conflict prevention and management. Such systems have as yet been hardly applied and tested in science. Yet their application in other fields of society, be it public organizations such as municipal administrations or medium-sized and large businesses, yields very positive and encouraging results. Special training and individual coaching of the involved stakeholders can improve the functional capability of organizations and sensitize and prepare their prot-

agonists for dealing with difficult situations. This is what constitutes the preventative character of such a system. In the event of conflict, clear structures, processes and systematic process guidance by advisors in handling a case help and prevent escalation. The use of mediation and other interest-oriented approaches in the field of conflict management produce particularly positive results.

Large-scale transdisciplinary research projects differ from public organizations and commercial enterprises regarding their organizational structures and cultures. This is why conflict management systems need to be designed specifically for this field and implemented step by step. This booklet provides you with a 'manual' for doing so. Conflict management systems offer great opportunities for projects at the interface between research and development cooperation; however, the prerequisites are courage and openness on part of scientists, civil society as well as funding bodies to address the issue of 'conflict'.

The BMBF and the BMZ hope this publication will find numerous courageous readers.



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World Café Trans-SEC Consortium, Tanzania (Morogoro) 2013

Large-scale international collaborative research projects are temporary and complex systems. Unlike businesses or governmental organizations, such projects are co-operation systems, meaning that hierarchies within the system are limited. While there may be hierarchies within collaborating institutes, they do not exist between them. Further, such large scale collaborative research projects tend to be interdisciplinary, intercultural, and mostly virtual. The different disciplines have their own (disciplinary) languages, with culturally differing values and role expectations impacting expectations. Collaborative research projects face the challenge of making decisions under the consideration of great diversity. Conflicts are inherently inevitable. It is at this point that CPM-Systems come into play, to support and help overcome crucial points.

Dirk Sprenger, Centre for Rural Development (SLE) Germany, External CPM Facilitator (Trans-SEC)

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Levels of interest of institutionalized conflict handling in organizations

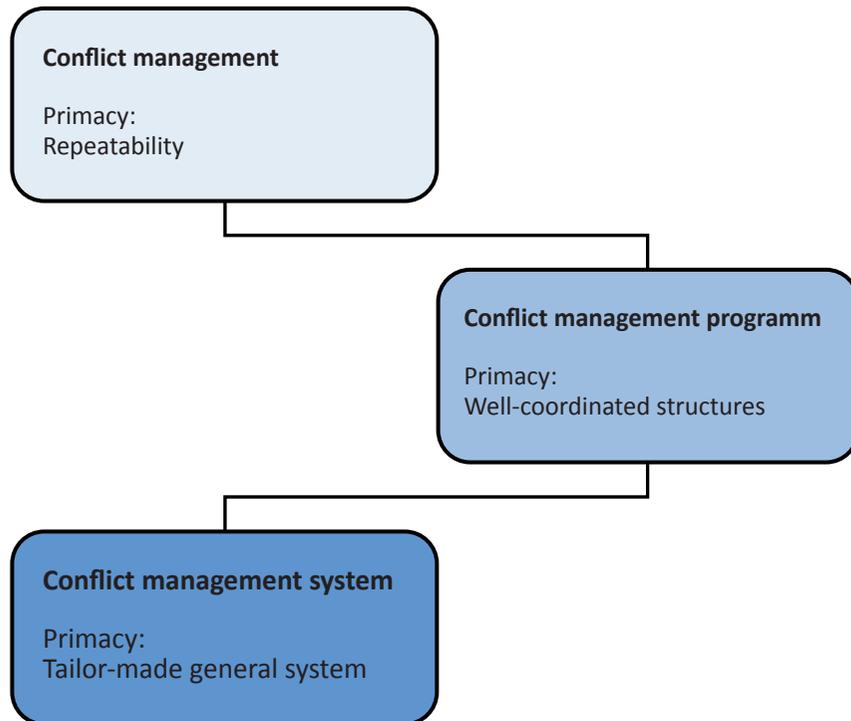


Figure 1: Primacies of organizational conflict management

Conflict has three distinct aspects for organizations: conflicts cost money; conflicts cause a negative working climate and, hence, organizational culture; and conflicts are both an asset and a threat for organizational development. Regardless of the type and character of an organization – be it a company or a university; large or small; with an international or a regional focus – these aspects highlight the reasons why organizations started to take conflict and the handling of conflict more seriously in recent years.

The starting point is a simple managerial goal: to make the handling of conflicts (like the handling of other challenges) within the organization predictable and to put it on a solid basis. In the last decade, this organizational goal resulted in the invention of conflict management. Hence, the “systemic and institutionalized approach to conflict, by which the course of the conflict is deliberately influenced” (PwC and Viadrina, 2013, p. 88. Own translation).

Although the causes of each conflict are unique, each one should be dealt with through a professional and profound process. Thus, conflict management requires a well-coordinated and balanced course of action. An increasing number of organizations are establishing their own conflict management

programs, with clearly defined processes and tasks designed to ensure a well-coordinated and balanced course of action. However, the specific elements of each conflict management program vary. To offer a few examples: Some organizations have set up ports of call that offer in-house consulting on available conflict handling processes. Others, like SAP Germany, have invested considerable sums in training employees to become in-house mediators and conflict processors. Europe’s largest college of

art, “Universität der Künste Berlin,” provides a detailed roster of specialized external conflict consultants. There is also wide variation in the external communication of conflict management programs, ranging from proactive to discreet.

Figure 1 illustrates the primary levels of interest related to institutionalized conflict handling in organizations.

While conflict management programs are confined to well-coordinated and interconnected structures, conflict management systems go beyond the original goals of conflict management programs insofar as they realize all necessary system components of a system model. For example, the Viadrina Component Model of a conflict management system has been used as a point of reference for a considerable number of conflict management programs in recent years (PwC and Viadrina, 2013, p. 18).

Goal of CPM-System Implementation

Overall, research projects can turn out four ways: Projects can be effective and efficient at the same time (S1), which marks the ideal project performance (grey box). This means that the project meets the goals set in the project proposal and these have been reached cost-efficiently, with the lowest capacity use possible (staff time, infrastructure measures, research equipment, communication etc.). Conflict Prevention and Management – CPM – may support getting close to this ideal situation, assuming that the motivation, quality of collaboration, and communication structures of all involved actors (including support staff, technicians, and scientists) are very high and the resulting transactions costs are minimized. Deviations from this ideal situation happen either through inefficiency (high input use, but low effectiveness as the worst case - S4) or high input use, although the effectiveness of promised results is met (S2). Or efficiency is very high in terms of input use (S3), but the promised results of the project proposal are not fully met for multiple reasons (differently assumed frame conditions, mismanagement etc.).

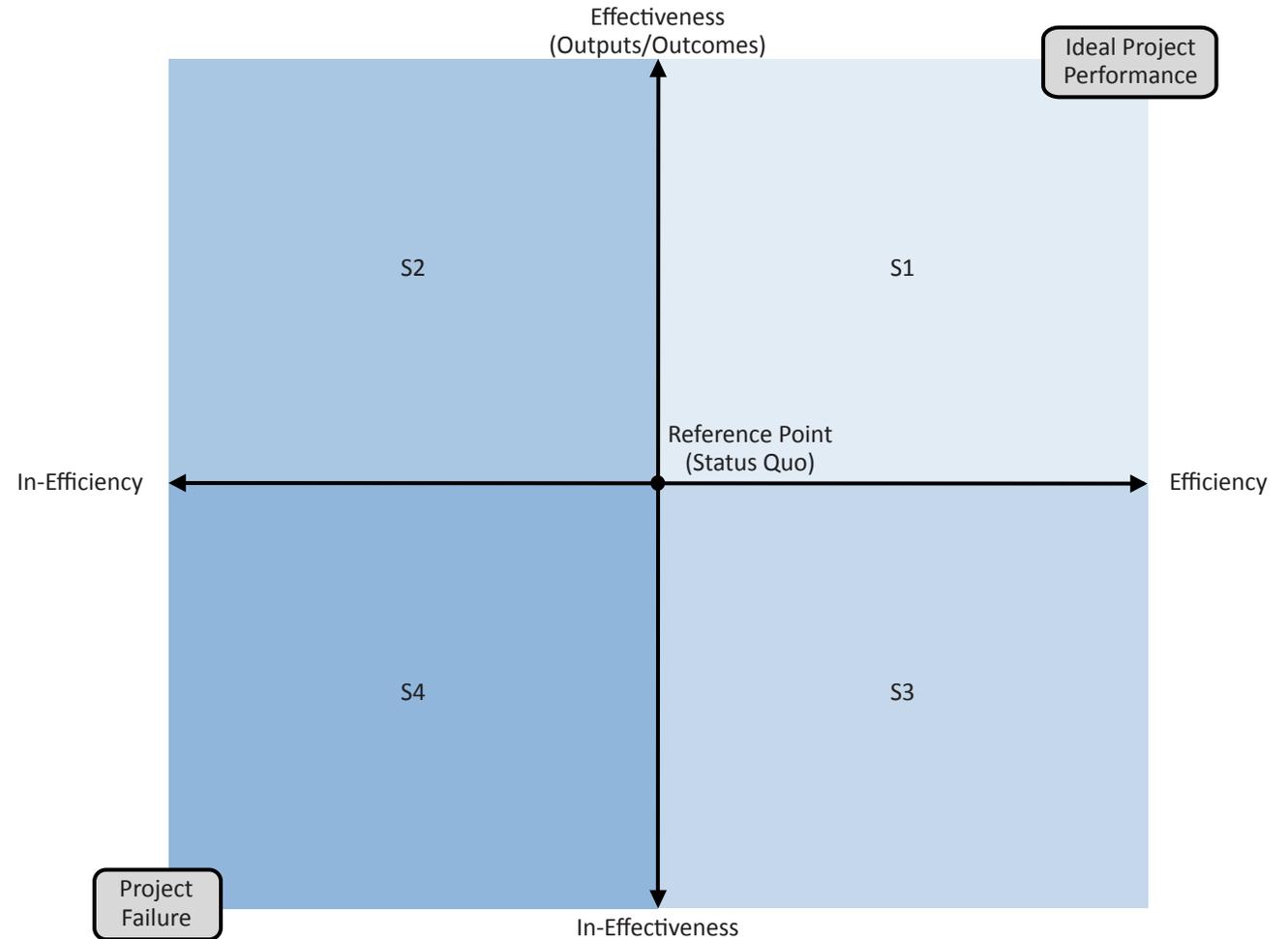


Figure 2: Goal of CPM-System Implementation

Collaborative Research Projects

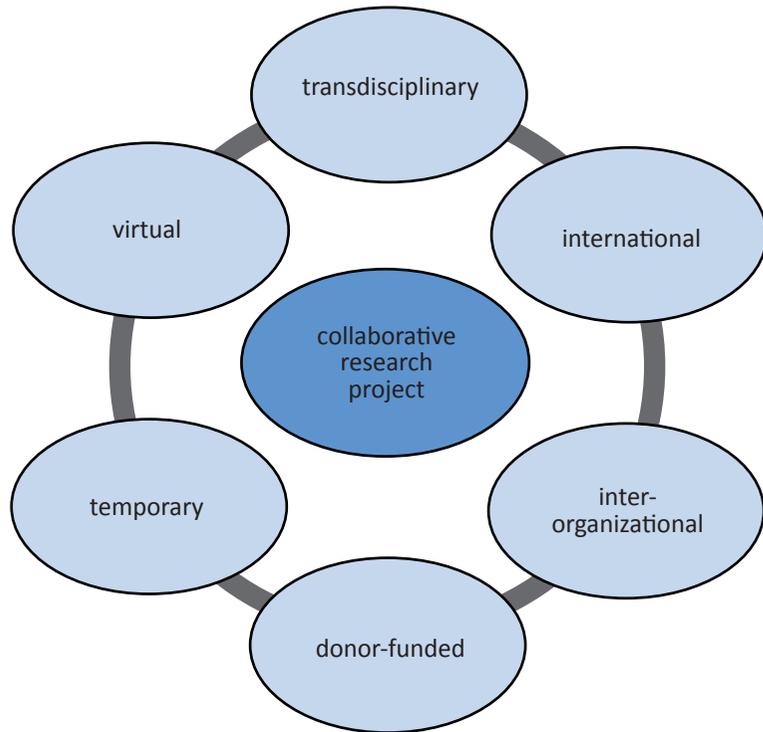


Figure 3: Characteristics of collaborative research projects (based on Löhrr et al., 2016)

Background on project research approach

Against the background that global challenges such as food security, climate change, and global health issues are so complex that they cannot possibly be addressed by single scientific disciplines, the scientific arena is shifting from research projects applying one-dimensional approaches to broader inter- and trans-disciplinary approaches. This shift

is motivated by the notion that solutions to complex real-world problems can only be found if scientific research projects are interdisciplinary from the outset and also involve non-scientific stakeholders. Such trans-disciplinary research approaches aim at overcoming disciplinary boundaries by taking into account the diversity of scientific and societal perspectives of the problem and their respective means to find solutions. A coherent theory or methodology of integrating multiple approaches within research programs does not yet exist. Each project usually develops its own approach, including determining how the multiple project partners and members collaborate with each other as well as with the stakeholders.

Characteristics of collaborative research projects

Collaborative research projects are complex organizational settings and their management is challenging.

Such projects tend to be international, inter-organizational, interdisciplinary, virtual, temporary, and third-party funded. These types of projects also tend to incorporate considerable trans-disciplinary components, with substantial stakeholder involvement in the process design (figure 3). Conflict potential among the project members is high and can lead to project failure if it is not managed well. To give just one vivid example: 79.3 % of project

members working in a collaborative research project on food security reported having personally experienced some level of conflict in the project (Löhrr et al., 2017b).

Typical management structures of collaborative research projects

Lean management structures with limited financial and personal resources allocated to overall coordination and management are typical in scientific research collaborations. A decentralized structure prevails, with relatively flat hierarchies between the partnering organizations and responsibilities split between project members. Project managers have limited decision and sanctioning power and are usually scientists by profession. Typically, they are not specifically trained in project, human resource, or conflict management. Escalation of conflict in research projects is very damaging, as in addition to limited project management training, there are few resources available to cope with conflict costs, including delays in delivery, poor data, staff absenteeism, replacement of staff, and extensive conflict management processes. In addition, well-known coping mechanisms, such as budget top-up or time extensions, are difficult to obtain from third-party funding.

CPM in Collaborative Research Projects

Figure 4 shows the different drivers impacting conflict in collaborative research projects in order of importance, as rated by 69 project members of a collaborative research project on food-security (Löhr et al., 2017b).

Connection with CPM

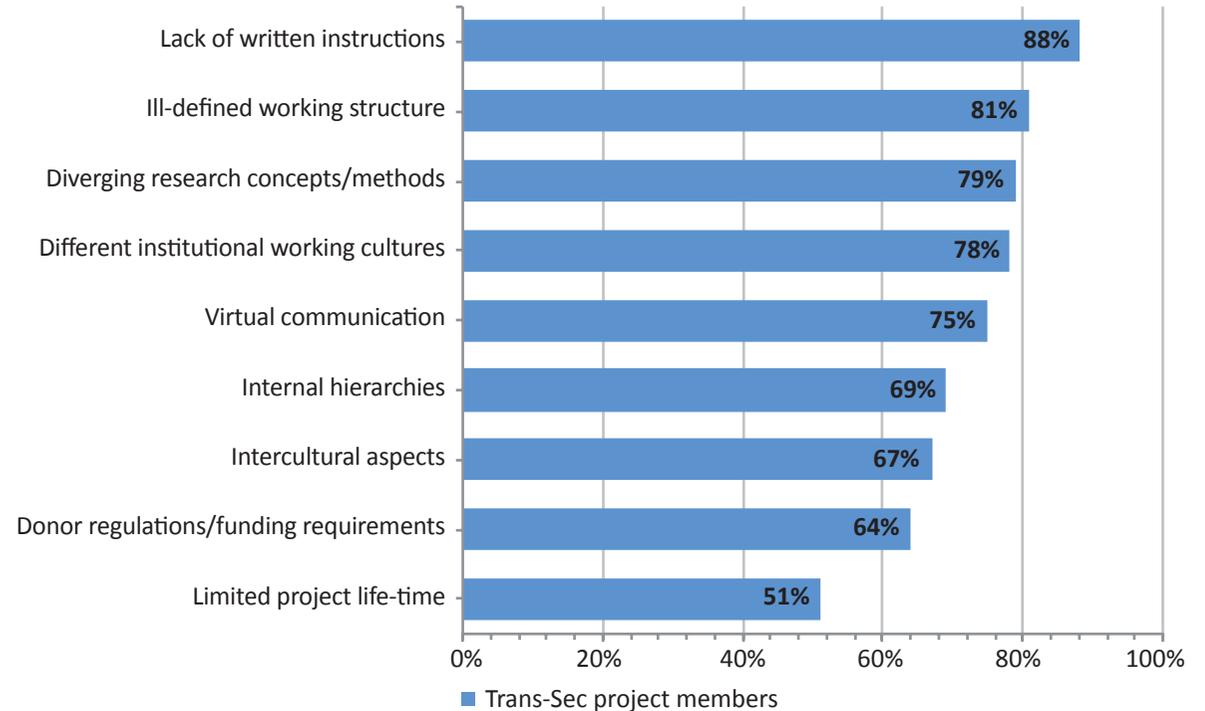
Understanding research collaborations as a process of teamwork that requires cooperation and coordination of members to succeed is critical. As miscommunication and conflict can occur in any group, members need to be equipped with skills and knowledge on group processes, team development, and conflict management in order to minimize its destructive effects. The literature proposes various individual activities and measures to facilitate collaboration, for example team building, creating a shared vision, workshops to familiarize project members with project based challenges, as well as communication and negotiation training. Conflict Prevention and Management Systems (CPM-Systems) are another possible tool to support project members in a planned and continuous approach to prevent and manage escalating conflicts.

CPM as support tool

A CPM-System can serve as support tool in scientific research projects on the operational and managerial levels. On the operational level, (i) trainings on communication and conflict management can improve communication skills and conflict competence among project members. This can prevent the escalation of conflict and facilitates conflict management on the lowest level possible. (ii) CPM

services, such as mediation and coaching, support project members in case of conflict. On the managerial level, (i) training of project members as well as the provision of CPM services (such as mediation, coaching) can reduce the need for conflict management by project managers. (ii) A CPM-System can also assist in case of conflicts between project members and project managers. (iii) By providing services, such as coaching or a jour-fixe as reflection

session for project management, the CPM-System can support project managers in fulfilling some of their management duties.



Source: Trans-SEC CPM online survey. Note: responses on a five point scale with categories 0 “not at all”, 1 “very little”, 2 “some”, 3 “a lot”, and 4 “a great deal”; for the computation of percentages the variable was dichotomized and categories 1 to 4 were collapsed into one.

Figure 4: Conflict drivers in collaborative research projects (based on Löhr et al., 2017b)

The Process of CPM-System Design and Implementation I: Defining Framework Conditions

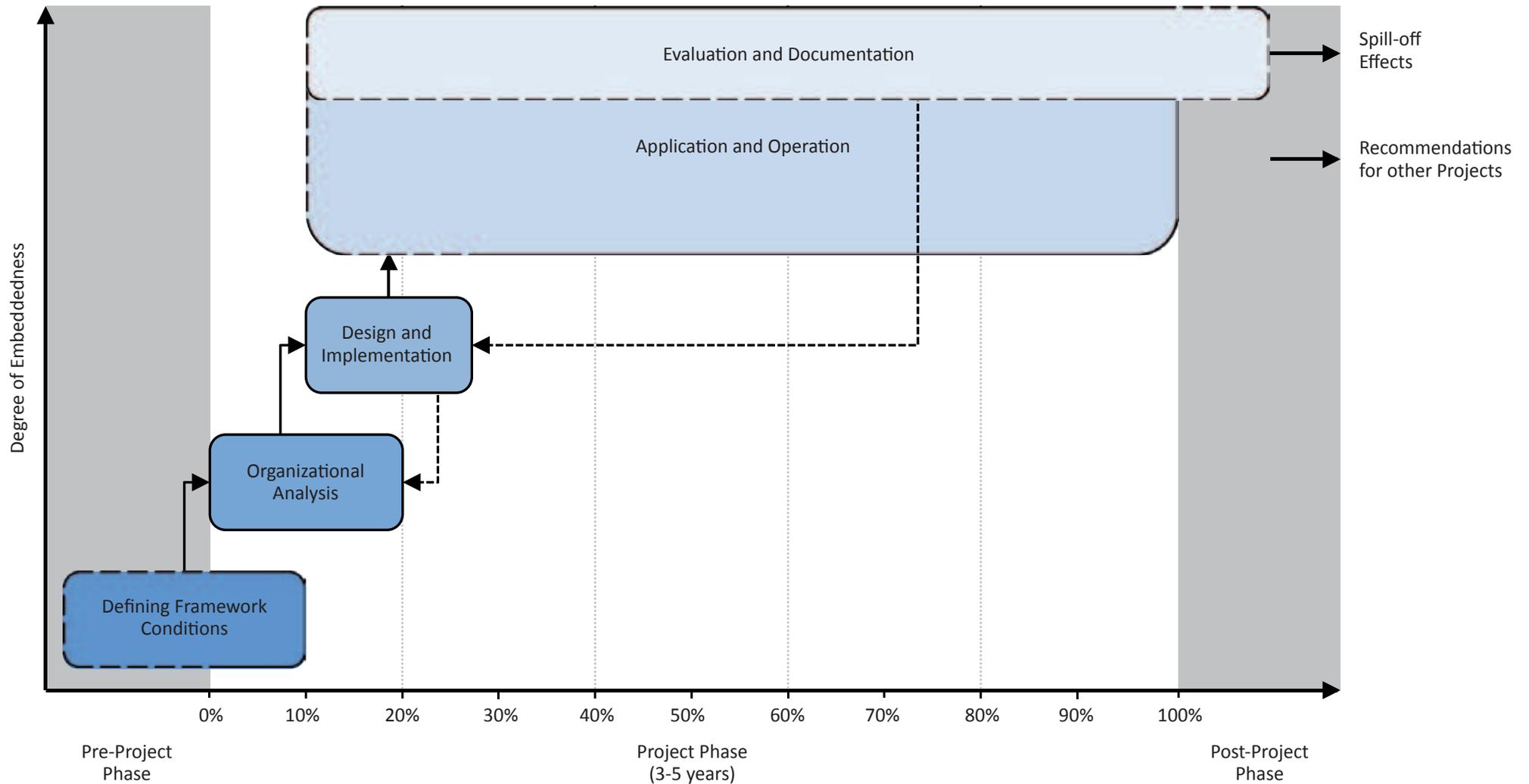


Figure 5: CPM-System Design and Implementation Process

Each CPM-System should be tailor-made to fit the needs and circumstances of each individual project. A number of steps and guiding principles can help to design and implement such a system successfully (figure 5). On the next pages, the steps are elaborated in more detail.

CPM design and implementation process

The design and implementation of a CPM-System is an iterative process that can be divided into five steps. Figure 5 shows the different steps of CPM-System design from the initial idea to project completion. The process is not confined to the project's lifetime but starts parallel to the planning of the project and has an impact after the project is finished. Feedback loops ensure that feedback and lessons-learned are continuously integrated. Thus, the design is not only based on the initial organizational analysis (step 2), but it evolves with on-going observation.

Step 1: Defining Framework Conditions: This activity already commences before the project start with the need to include a CPM-System in the project proposal to secure funding. Additionally, including the CPM-System in the project design as joint decision by all project partners and identifying suitable candidates for the CPM coordination will facilitate the implementation process.

Step 2: Organizational Analysis: should start parallel to the project start to facilitate quick system implementation. This should be completed in the first few months of the project in order to ensure that all team members are aware of CPM from the day they start.

Step 3: Design and Implementation: While the full system can only be implemented after a thorough organizational analysis and with participation of project members, implementation of CPM activities should start as soon as possible, when milestones are set and as task responsibilities and group norms begin to emerge.

Step 4: Application and Operation: This is the main period of the CPM-System. Structures with activities and measures clearly communicated to the project members must be set up. Over time, additional measures and services can emerge based on feedback, thus increasing the quality of embeddedness. Further, with time, CPM-System use by project members should increase, thereby increasing the System's embeddedness.

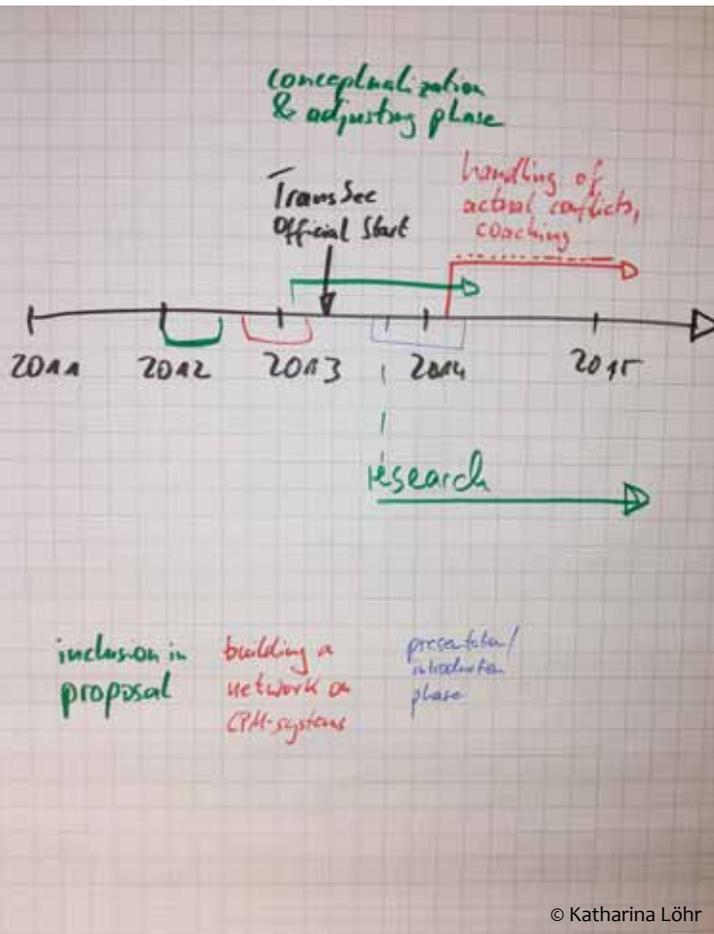
Step 5: Evaluation and Documentation: This should be integrated in the System design from the beginning and be a continuous process that facilitates adjustments and documentation of learning. A final overall assessment should be carried out toward the end of the project lifetime and result in reports that include recommendations for comparative future projects.

Principles of CPM-System design

When implementing a CPM-System a number of principles should be followed:

- Easy and simple access to services and measures by providing multiple access points and providing clear information;
- Free from reprisal by protection of privacy/confidentiality;
- Provision of options for preventing, identifying, and resolving issues;
- Promotion of a culture that works to solve problems at the lowest level through direct negotiation;
- Provision of interest- and rights-based options; and
- Continuous improvement supported by a coordinating unit.

Description Step 1: Defining Framework Conditions



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CPM Conceptual Planning Meeting, Germany (Berlin) 2014

This activity commences before the project starts: a CPM-System needs to be included in the project proposal in order to secure funding. Additionally, including CPM-System in the project design as joint decision by project partners and identifying suitable candidates for the CPM coordination will facilitate the implementation process.

Key factors for successful design

To design a CPM-System appropriate for the specific project needs, a number of key factors should be considered:

Project frame: budget, lifetime, and heterogeneity

Collaborative research projects are diverse in many ways, including budgets, lifetimes, and number as well as composition of project members. Smaller projects might involve modest financial resources and last only a few months, while a large project might involve many millions of Euro and run for several years. In some cases, project members may be located within a single country and only at universities or, in other cases, spread across multiple countries and multiple types of organizations (universities, non-university based research centers, NGOs, etc.).

Depending on the project's set-up, different measures and activities of CPM might be appropriate. In a project that is relatively small with only a few members and a small budget, a lean CPM program focusing on a few specific measures might be most suitable. This may include teambuilding exercises and a short training on conflict aware-

ness and communication at the onset of the project; the availability of an external conflict contact point; and the integration a reflection session once per year at the annual status conference. The overall coordination of activities may be part of the general project coordination. However, in a large-scale project a full CPM-System may offer better results: comprising an external coordination unit responsible for the System's implementation, operation, and evaluation; internal conflict contact points installed in different partner institutions and countries; as well as conflict prevention activities throughout the lifetime of the project.

The composition of project members and CPM staff is also important to consider when designing a CPM-System. System design must keep in mind cultural differences, including, for example:

- Direct vs. indirect communication;
- Attitudes toward cooperation, competition, and conflict;
- The nature and desire for preservation of relationships among disputants;
- Authority, social rank, status, and caste issues;
- High-context and low-context communications; and
- Concepts and management of time.

Organizational set up might require recruiting CPM staff in multiple countries and from multiple partner institutes in order to establish decentralized structures that facilitate equal and easy access to all project members independent of their geographic location.

CPM structural set-up

CPM mandate: It is essential to define the aim and mandate of the CPM-System as well as its relationship to management early in the process. In collaborative research, a decentralized structure usually prevails, with relatively flat hierarchies between the partnering organizations and responsibilities split. Thus, each member possesses a high degree of autonomy and decision power, limiting both hierarchy and the sanctioning power of management. Regarding the mandate, it must be clear if CPM-System actors have a purely advisory role or if they have sanctioning power when it comes to conflict management. Thus, the relationship between project management and the CPM-System actors must be transparent; especially regarding the protection of confidentiality.

CPM Budget: The extent of CPM measures needs to stay rather flexible since the level of implemented activities and services depends on the availability of funds. Important is the percentage shares that are invested for planning / implementation / application / documentation-evaluation. Roughly, they should be divided into shares of 10/20/60/10 in order to be effective for all necessary tasks. Important is planning for an efficient implementation with strong participative involvement of all actors, as well as high budget use for applications of measures. The latter must be kept flexible since it depends on the demand for CPM services.

Scope of CPM-System: Regarding the design of the CPM-System, it is essential to define the scope of the system early in the process. Collaborative

research projects tend to have high stakeholder involvement, with conflict not only occurring between project members (internal) but also between project members and stakeholders or between stakeholders. When designing a CPM-System, the scope of the System must be chosen carefully. It may vary between narrow systems, only providing support for the respective project members, up to a broader approach that also provides measures and services to external stakeholders, such as farmers or villagers where project-related field research takes place. This decision must be made quite carefully in order to draw a clear line between those conflicts that are part of the CPM mandate and those that are not in order to prevent the System's capacities from being exceeded.

CPM Coordination: A person or team needs to be appointed to coordinate CPM implementation as well as to provide training, advice, and conflict management. Ideally, a team with individuals experienced in setting up conflict management systems, practical experience with conflict management, and training in international environments should be appointed. This ensures not just broad expertise but also process continuation in the event of staff changes. To account for the international nature of such projects, the representation of coordinating staff from each partner country should be considered.

Budget administration: To allow for the functioning and usage of CPM-System by project members sufficient financial and human resources must be allocated to it. This can either come from each institute's project budget, allocated to specific con-

flikt prevention and management activities, or it can be allocated centrally to a coordination unit, which then covers all expenses for CPM activities. To account for the international project set-up, shared decision power on available CPM resources is recommendable.

Staffing of CPM-System: Another important decision for the CPM-System design is whether it is staffed internally or externally. Conflict management staff might be appointed internally by selecting and training project members. It is also possible to provide support with external staff, by hiring external coaches or mediators as trainers and contact points. A hybrid approach is also an option with internal staff initially handling emerging issues, and external support provided upon demand.

When deciding for internal conflict contact points, decisions need to be made with respect to the most suitable structure. (1) Institutional contact points, appointed by the project members and trained within the CPM-System, work well with a decentralized project structure by ensuring a high level of representation and access across multiple hierarchical levels. However, it requires a lot of time and resources to carry out selection and training, possibly resulting in hierarchical fallacies. For example, if junior scientists are selected as conflict contact points, seniors might not approach them for conflict consultation. If only seniors are appointed, then the threshold to approach them might be too high for juniors and non-scientific project members. (2) Appointing and training group/task leaders is an alternative structure that makes use of existing structures. At the same time, it reinforces hierarchi-

cal structures and might create a threshold for project members to address conflicts. (3) A third option could be installing one overall conflict contact point per country. This option may be best for a project setting that is time-bound and financially restricted as it takes into account the international set-up.

Degree of participation: The degree of participation in the design process needs to be carefully chosen and openly communicated to project members. In an international context with project members and CPM staff originating from multiple cultural backgrounds (e.g. national, regional, organizational, disciplinary) participation is especially important in order to account for the diversity of behaviors, expectations, and needs.

However, in a research context, limited participation might be more suitable: The CPM processes run parallel to the accomplishment of the research tasks. With project members globally dispersed and communication mainly virtual, the organizational setting makes it inherently challenging to achieve a continuous and high degree of participation. Participation is facilitated by means of personal exchange and interaction, which requires regular meetings between researchers and project members.

Different means and incentives can help facilitate participation: Meetings can be combined with other project meetings, such as annual status conferences. However, the challenge remains to allocate time to conflict prevention and management activities, as conference agendas are typically tight. Spaces for virtual participation, for example by means of Skype conferences, internet discussion

forums, and telephone conversations, should be provided – but chosen carefully. A project budget needs to be allocated specifically to CPM activities in order for it to cover its expenses for meetings in the participating countries. Motivation and local ownership can be safeguarded through an incentive structure that provides benefits from participation, such as free training and awarding of certificates.

Example of CPM in a case study project: Scale-N

The Scale-N project sought to safeguard food and nutrition security in Tanzania by supporting the development of diversified and sustainable agriculture. Despite not having a CPM budget, management decided to integrate a slim CPM structure to support work processes and help in case of conflict among its approximately 20 project members. In the core partner countries, Tanzania and Germany, external conflict contact points were assigned to assist with conflict management on demand. Coaching supported management with reflection and advice. External moderation of key events, like conferences, was used and information on CPM posted on the project's webpage.

Example of CPM in a case study project: Trans-SEC

In Trans-SEC, a large-scale food security project lasting five years and implemented in Tanzania, the overall project manager delegated the design of a Conflict Prevention and Management System (CPM-System) to a Coordination Unit based in Germany. During the initial three years, a set of mechanisms and activities were designed and implemented to both prevent conflict escalation and provide support in cases of conflict. Accounting for the project's structure, a decentralized CPM-System was established with organizational conflict contact points appointed and a national CPM coordinator elected for Tanzania. Various activities and mechanisms were implemented: Conflict prevention measures and activities such as teambuilding and team supervision, workshops on conflict awareness and communication, coaching, and a reflective jour-



Scale-N Status Conference, Germany (Berlin) 2017

fixe for project coordination. If needed, individuals could contact any contact point they wished. An external consultant was also put in place, offering moderation of processes with high conflict potential, such as board meetings, as well as coaching and mediation as needed. Documentation of the CPM-System was distributed to all consortium members.

Continuous evaluation of the CPM-System ensured documentation.

Description Step 2: Organizational Analysis



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Organizational Analysis should start parallel to the project start in order to facilitate the quick implementation of the System. It should be completed in the first few months of the project.

In most scientific projects, organizations of different types (universities, non-university research centers, NGOs etc.) and from multiple countries cooperate. Different procedures with regards to communication, hierarchies, and conflict management are in place at each individual partner institution. A careful mapping of organizational structures, positions, and responsibilities is important, as is conducting a needs-analysis for CPM design.

Essentials for organizational analysis

Key questions that should be answered at the end of the assessment process are as follows:

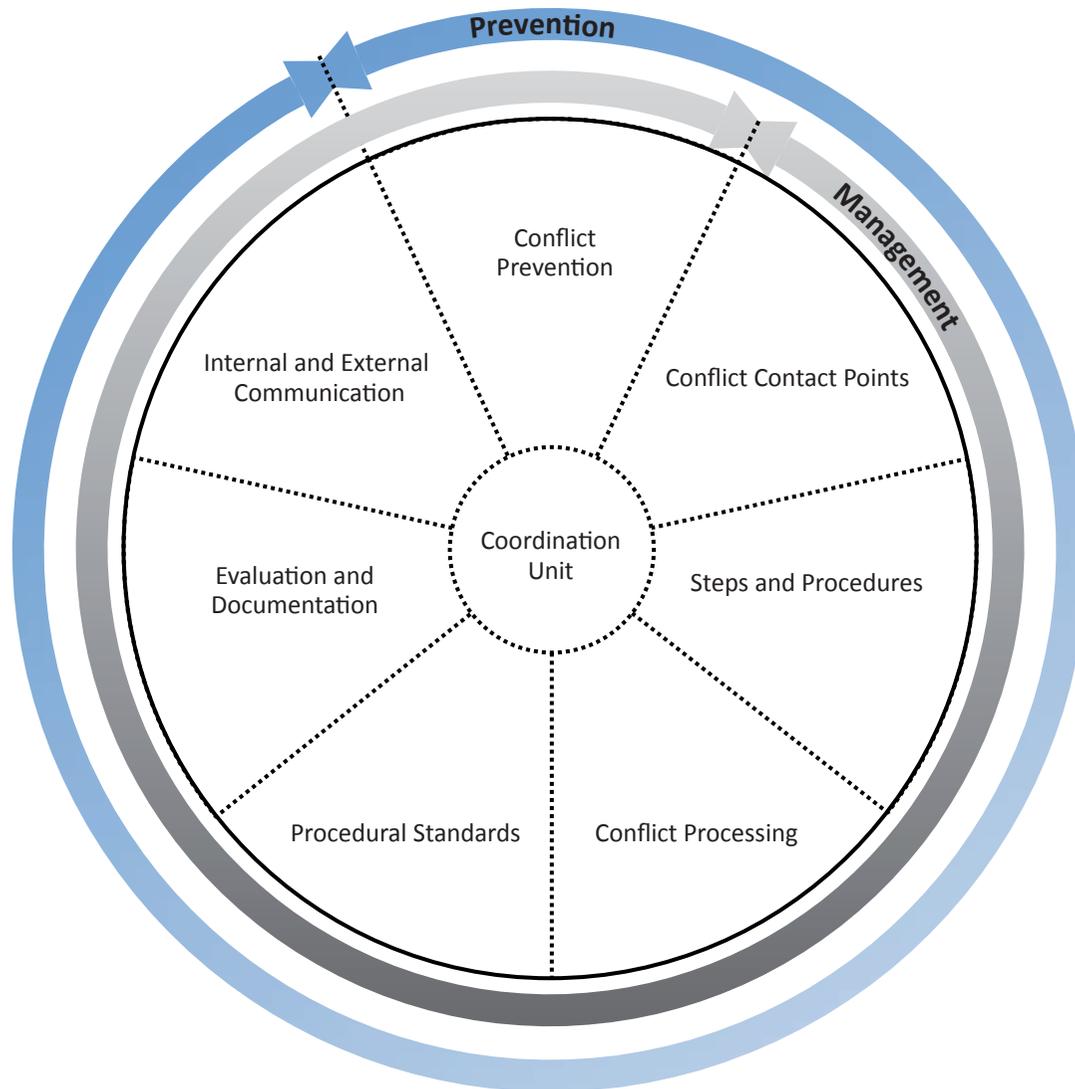
- What are the organizational structures (number of institutes, locations, working structures; how are decisions being made; which power relations exist)?
- What are the known conflict(s) that the project faces?
- What are the existing conflict management procedures?
- What kind of structures, activities and measures are needed for the prevention or management of conflicts?
- What should not happen with CPM implementation?

The Process of CPM-System Design and Implementation II: Organizational Analysis

Method suggestions for organizational analysis

The table below lists different methods that can help facilitate the project's organizational assessment, and presents the respective objective, motivation for usage, and example questions for implementation.

Method	Objective	Motivation	Example Questions
Document Analysis	Assess written rules and regulations, conflict management policies as stated in institute policies and in the project proposal	Obtain knowledge on formal structures, rules, and regulations that define the work cooperation	What are rules and regulations on conflict management? What are the regulations and hierarchies? How is decision power with respect to budget and accounting allocated?
Participatory Observation	Assess informal rules, norms, challenges, and conflict management techniques/mechanisms	Complement organizational assessment to obtain information beyond the written rules and regulations and the personal feedback	Which rules, norms, and procedures can be observed in the interaction of project members?
Individual Interviews	Establish needs and recommendations for the design of the Conflict Management System; obtain feedback from project members on established structures	Address individuals only. Take the discussion to a deeper, more personal level by providing a secure and confidential space for project members	What is your role in the project? With which organizations are you cooperating within the project/Who are the main actors you are working with in the project? Does your organization have formal procedures in place to deal with conflicts? If conflicts arise at work, how do you usually manage them? What are your fears/objections about CPM?
Focus Group Discussion	Establish needs and recommendations; obtain feedback from project members on established structures; create dialogue between participants	To ensure representation of each institute and to facilitate dialogue among project members	What are your experiences when working in international and interdisciplinary research projects? What are common challenges in collaborative research projects? Does your organization have formal procedures in place to deal with conflicts? If conflicts arise at work, how do you usually manage them? What measures and activities do you recommend for CPM design? What are your fears/objections about CPM?
Large-Group Discussion Forums	Establish needs and recommendations; obtain feedback from project members on established structures; create dialogue between participants	Achieve a high degree of participation and obtain input on the system design	What kind of challenges could occur in the project? What kind of measures and tools does the project need for conflict management? How can we overcome project challenges?



Conceptual Model CPM-System

Figure 6 shows a Conflict Prevention and Management System (CPM-System) model for collaborative research projects. It is a conceptual model that describes and represents in a systemic approach, how eight complementary components are jointly implemented: (1) Conflict Prevention; (2) Conflict Contact Points; (3) Systematic Choice of Steps and Procedure; (4) Conflict Processing; (5) Procedural Standards; (6) Quality Assurance; and (7) Communication. These components are coordinated and controlled by a (8) Coordination Unit.

Figure 6: Model of Conflict Prevention and Management System for International and Inter-organizational Research Projects (CPM- System)
(Adapted Viadrina Component Model; PwC and Viadrina, 2011, 2013) (Löhr et al., 2017a)

Particularities of CPM-Systems in Research

Decentralized structure

In most other contexts, CPM-Systems are designed for a single organization with a centralized management structure, meaning that both the contact points and the coordination unit are provided by one body. However, in collaborative research projects, with multiple autonomous organizations, from different countries and disciplines, the CPM-System must account for the inherent decentralized structure and cultural diversity. A decentralized structure might be established by installing multiple conflict contact points in each partner country, for example at each individual institute, or one central conflict contact per country.

CPM standards

CPM activities and measures should be carefully selected to meet the needs of all project members. Further, its standards should not be centrally prescribed; rather room for cultural specifics should be provided, but with minimum required standards.

Role convergence

Typically, the task designing the CPM-System is separate from actual conflict management practice. In research projects, the Coordination Unit is usually responsible for the conceptual work as well as training, advice, and conflict management. This centralization of roles and responsibilities relates to the project specifics, as the project is relatively small, time-bound, and financially limited.



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Selection of conflict contact points

Conflict contact points are the first point of contact when problems arise. Project members can contact them if assistance is desired or conflict contact points can approach people if they detect an issue. Conflict contact points can be selected in many ways: 1) Appoint one conflict contact point per partner institute. This can result in a large number of contact points, who each must be trained, potentially overstraining institutional capacity if teams consist of only a few members. 2) Select conflict contact based on regions or countries, thus ensuring equal representation. 3) Align conflict con-

tact points with the project's organizational structure, training the leaders in conflict management. As individual research projects have relatively small structures and limited time, this might be appropriate for quickly establishing conflict management structures. However, only choosing managerial staff is problematic because it strengthens the position of existing leaders, thus undermining the goal of implementing measures throughout hierarchical levels.

Process of CPM-System Design and Implementation IV: Application and Operational Phase

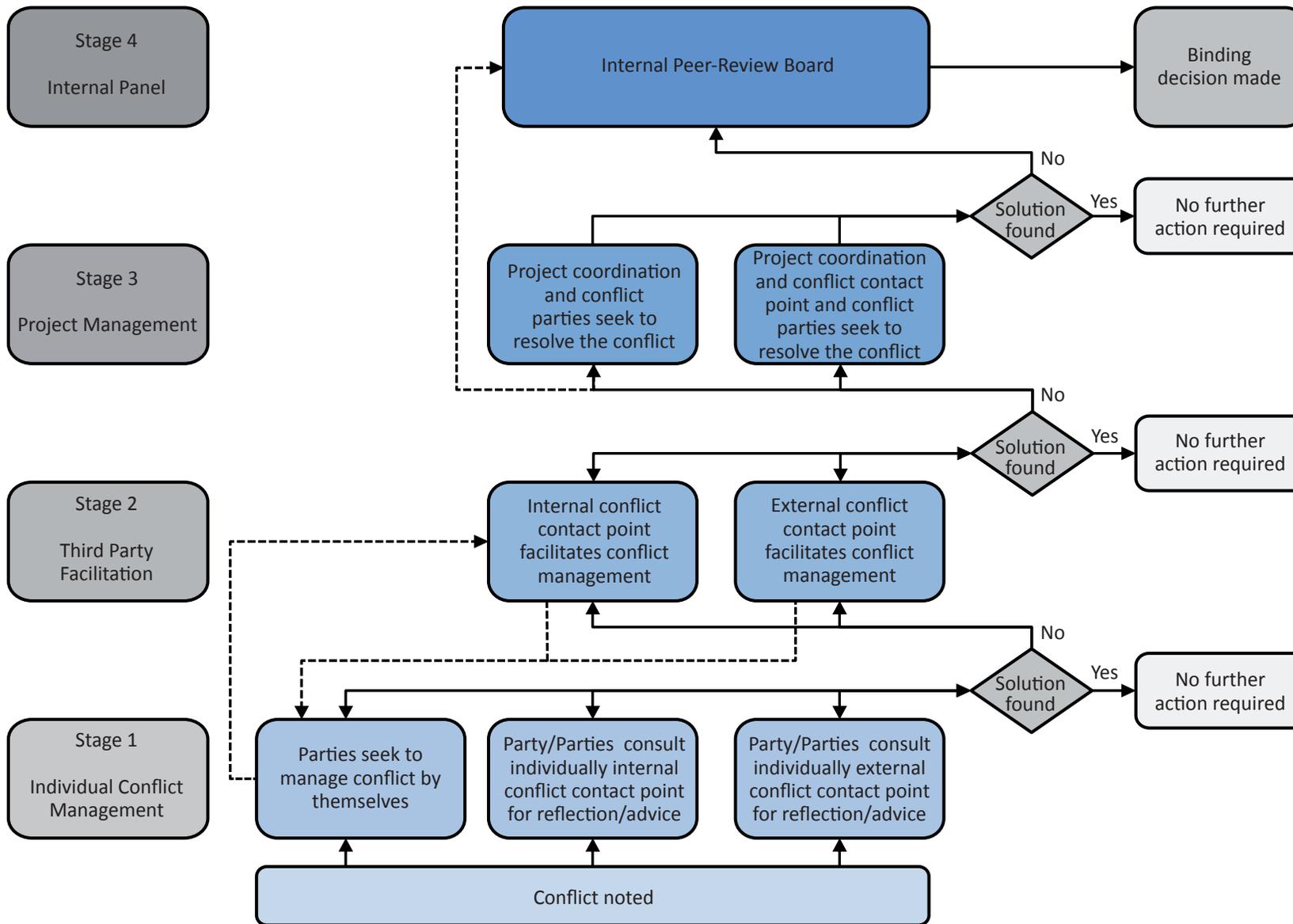


Figure 7: Conflict Management Process

Description Step 4: Application and Operational Phase

This is the core phase of the CPM-System. The established structures, with its activities and measures, will have already been clearly communicated to the project members.

Conflict management process

Figure 7 depicts CPM processes when conflicts emerge. While the stages imply a sequence of steps and suggest an order to enable conflict management at the lowest level possible, it is also possible to skip stages, moving forward and backward between steps. This allows conflicting parties maximum control of the process.

Stage 1: Individual Conflict Management: The conflicting parties aim to resolve the issue by themselves. For support, they can contact internal or external conflict contact points for individual reflection and advice.

Stage 2: Third Party Facilitation: Conflicting parties request the support of an internal or external conflict contact point, such as a mediator, to assist them with conflict management. External facilitation might be preferred, for example, if some conflicts are too delicate for internal conflict contact points to handle or project members prefer conflicts to stay absolutely confidential. It is also possible that first attempts to solve a conflict individually or with internal support fail, for such cases external options are available.

Stage 3: Project Management: If the conflict is not resolved, conflict management asks project coordination to manage the issue. It is possible for conflicting parties to discuss the conflict with project

coordination alone or have a conflict contact point accompany the process.

Stage 4: Internal Panel: If no solution can be found using individual or third-party conflict management, the case can move to an internal panel that was previously composed. For example, the internal panel could be composed of the project's board members. The panel's mandate is to come to a final decision on a conflict issue. This panel can be particularly important if conflict involving project management emerges that cannot be solved with third party facilitation but needs a solution. Important to note: At this stage, the panel has the mandate and power to make a binding decision.

Case studies conflict management

Case 1: Diverging concepts

In the first year of a large collaborative research project, conceptual and terminological agreements between project partners were needed. During this process, tensions between the different research institutions emerged, as diverging conceptual and methodological approaches were difficult to reconcile. One key question was whether the research project was strictly a scientific research project or if it combined research and development. A major conflict line emerged between two institutions. CPM supported processes offering individual reflection sessions with the respective parties. The sessions provided space for reflection, to decide what is negotiable and what is set. It also provided space to reflect on personal behavior and how to adjust it during discussions in order to have constructive dialogue. Tensions were not fully resolved, but the situation eased to the extent that parties were able to work and collaborate further. (Dirk Sprenger, External CPM Facilitator (Trans-SEC))

Case 2: Communication break-down within a working group

In this case, a project coordinator approached the CPM-System reporting tensions in a working group. Communications had broken down between two key actors of the working group, with each party assigning responsibility for the situation to the other party. As there was interdependence with other working groups, one group needing the research results of the other, the communication breakdown in the one group also affected other working groups. In a first step, individual talks took place between the external conflict contact point and the conflicting parties. Both parties identified virtual collaboration (non face-to-face) as a key source of conflict. They were willing to have a personal meeting in order to make plans for the next 12 months and to clarify their roles and responsibilities. Authorized by the conflicting parties, the external consultant reported this outcome back to coordination. As result, the coordinator was able to arrange a date with the parties to clarify issues in direct dialogue. (Dirk Sprenger, External CPM Facilitator (Trans-SEC))

Description Step 5: Evaluation and Documentation



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An evaluation and documentation system should be integrated into the system from the beginning, consisting of a continuous process that facilitates system adjustments and documentation of learning. Feedback loops ensure that feedback and lessons-learned are continuously integrated and that the design is not based only on the initial organizational analysis (Figure 5, step 2). A final overall assessment should be applied toward the end of the project, resulting in reports with recommendations for similar future projects.

Enabling the evaluation of the CPM-System requires defining goals that are ideally linked to indicators. Measurements should be regularly evaluated, with results reported back to project members. This ensures that the system is dynamic, allowing for continuous system adjustments as needed. It also enables the recording of lessons learned, which can benefit future projects.

Evaluation is possible on different levels. On the one hand, it is possible to evaluate only the output on the operational level, thereby evaluating the activities and measures put in place, their usage and effectiveness. On the other hand, it is possible to also measure system outcomes, looking for learning effects as well as organizational and personal changes, such as shifts in attitudes, procedures, or conflict management behavior.

Outcomes of conflict management systems can be distinguished concerning employers (here the project level) and employees (here the project members), although the levels are interrelated. On the organizational level, the benefit stems from reducing conflict costs, including staff absenteeism, replacement of staff, delays in task delivery, poor data, and extensive conflict management processes. Employee outcomes relate to increased levels of personal competence to manage conflict, less conflict avoidance behavior, greater work satisfaction, and increased organizational commitment.

So far, there is a tendency to measure effectiveness in monetary terms. Interestingly, focus is moving away from estimating efficiency in terms of savings toward a more value-based approach focusing on work quality, behavioral changes, and employee satisfaction.

Evaluating the effects of organizational changes requires the comparison of results to a baseline study or a set of indicators available for the time before the CPM-System was introduced. As research projects are temporary organizations that are newly established with no prior work history, no records regarding staff changes, publications, or expenses for conflict management are available. This makes it challenging to measure conflict cost reduction in monetary terms. A tool that helps estimate conflict cost in temporary organizations, such as research projects, is still pending. A baseline study on conflict competence and attitudes can help assess effects.

It is advisable to integrate in the CPM-System from the beginning a structure for evaluation and documentation; for example, in the form of an integrated System component (as shown in figure 6). Different options to ensure continuous evaluation and documentation exist; for example by assigning the task to the conflict management staff, PhD students, or an external cooperation partner.

There are many evaluation and documentation tools: (1) a baseline study on conflict competence prior to system implementation, thus facilitating CPM impact assessment, with a repetition of the survey mid-way and at the end of the project's lifetime; (2) a feedback questionnaire asking project members for feedback after each CPM activity they participate in; (3) a template for case documentation by the conflict contact points asking for anonymous information on conflict types, steps and procedures taken, as well as outcomes to help document the number and type of cases that the System manages; (4) regular meetings of the Coordination Unit reflecting on and documenting the

CPM processes; (5) regular phone interviews or on-line surveys with conflict contact points in the field (for example, one per semester) by the Coordination Unit in order to collect information on conflict management activities and receive feedback; (6) System reflection sessions at joint project meetings, for example in a plenary session or in form of focus group discussions or individual interviews; (7) an overall survey at the end of the project to evaluate the overall success of the CPM-System.

The Coordination Unit should follow a pro-active CPM documentation approach. Project members already invest additional time in conflict management activities beyond their regular project work. Asking them to document their additional CPM activities might be considered too time-consuming, resulting in poor quality data due to a lack of time or low motivation. Additionally, evaluation might be of low priority for project members compared to the members of the Coordination Unit who need the feedback to improve the System but also for filing the donor report.

With CPM resources typically limited, activities concentrate on the implementation of services and measures. Investment in documentation and, in particular, evaluation is often neglected. To minimize this issue, regular exchanges between CPM practitioners in different projects could be a step toward improving evaluation.

PhD students for evaluation and documentation

In the Trans-SEC project, research on the CPM-System was assigned to two PhD students integrated in the Coordination Unit and employed by the project's

lead organization. Although project members did not feedback negatively on this structural set-up, the PhD students faced two major challenges: First, they are project members with the assigned task of researching their own work environment. Second, project members could be concerned that information provided during the data collection phase might not be handled confidentially, potentially resulting in non-anonymous feedback being provided to management. To prevent a devaluation of researchers' participation in CPM and to ease research activities, the role of the CPM researcher(s) and their relationship with management should either be communicated very clearly or fully separated from the management by keeping those investigating the process outside the organizational structure. This could be achieved, for example, by linking the researchers to an external partner with no management function in the project.

Collaborations with external institutions

To facilitate evaluation and documentation of CPM processes, collaboration between the CPM practitioners and a research institute can be very useful and enriching. There are two leading examples: 1) The REDRESS transformative mediation program, resulting from a twelve year research collaboration between the United States Postal Service and the Indiana University School of Public and Environmental Affairs (Amsler, 2014); and 2) the "Round Table Mediation and Conflict Management of the German Economy," which brought together more than 50 German corporations and the Institute of Conflict Management (European University Viadrina, Frankfurt (Oder), Germany) for a ten year period (PwC and Viadrina, 2016). The cooperation at



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Teambuilding, Trans-SEC Consortium, Tanzania (Morogoro) 2013

the Round Table was of value for the companies, as they were offered first-hand expertise on scientific developments in the field of conflict management. Researchers also benefited from participating in the exchange of leading conflict management actors, drawing conclusions for future studies.



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Seedlings, Tanzania (Dodoma) 2014

1. Tailor-made system

As collaborative research projects vary in size and structures, each CPM program must be tailored to the project. Depending on the size and character of the research project, as well as available resources, providing more limited conflict management services and activities might be better than the implementation of a full system.

2. High CPM resource investment at project start

A considerable part of CPM resources should be invested at the beginning of the project lifetime in order to support the team in developing a shared vision, in defining roles, responsibilities and milestones, and to agree upon processes for dealing with conflict. Even if a complete CPM-System is not yet ready, in temporary collaborative research settings it is important to start implementing first measures parallel to the project start, when group norms are emerging.

3. Participation and ownership

Early stakeholder involvement is critical for guaranteeing high participation, which then enhances and safe-guards local ownership. This is required for successful CPM use.

4. Diversity, agency, representation

Being a conflict party as well as serving as a third-party to deal with conflicts – every facade concerning conflict typically turns out to be sensitive and crucial. It is, therefore, important that diversity in terms of nationality, race, gender, status, and age is considered. This includes agency and representation when determining the CPM structure as well as the selection of internal and external conflict contact points and conflict processors.

5. Definition of scope

Larger collaborative research projects tend to have high stakeholder involvement. Conflict not only occurs between project members (internal) but also between project members and stakeholders or between stakeholders (external). When designing a CPM-System, clear lines defining which conflicts are part of the CPM mandate and which are not must be drawn in order to prevent capacities and resources from being exhausted.

6. Investment in conflict prevention

Considering the temporary and heterogeneous character of collaborative research projects, conflict prevention measures are particularly important for facilitating good collaboration and preventing the escalation of conflicts that could otherwise endanger project success. By offering team building or training on communication and conflict awareness the development of trust is enhanced, which is crucial for effective team cooperation.

7. Assignment of a key person or team early in the process

A strong and functional Coordination Unit that designs and implements the CPM components is important for temporary and resource-bound project settings. Having a team design the CPM-System instead of a single individual brings a variety of skills and expertise that enriches the design process and, in case of staff changes, ensures process continuity; a crucial aspect in temporary work environments.

8. Autonomy for CPM-System

Budget- and structure-wise, a CPM-System needs to be strictly autonomous and clearly mandated. Otherwise, its neutrality will be questioned or there might be calls to reallocate the CPM budget to research activities.

9. Role convergence in coordination unit

The Coordination Unit should be in charge of the conceptualization as well as training, advice, and conflict management. This centralization of roles and responsibilities relates to the specifics of collaborative research projects, as the organizational structure is relatively small, time-bound, and financially limited.

10. Support of conflict contact points

The involvement of conflict contact points is key for the success of CPM-Systems. In order to enable them to fulfill their role and tasks, they need support from promoters in leading positions. Additionally, they may need backing in their facilitative role when conflict escalates as well as the exemption for their conflict work.

11. Evaluation and documentation

It is essential to proactively document CPM activities – not just for evaluation, but also for filing the donor report. The Coordination Unit may need to take this on in order to lighten the work load of conflict contact points and conflict processors.



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Henry Mahoo, CPM Workshop on Conflict Awareness, Tanzania (Morogoro) 2016

Prof. Dr. Henry Mahoo, Sokoine University of Agriculture (SUA), Tanzania

In recent years, practitioners, scholars and researchers have used conflict prevention and management (CPM) as a tool to resolve, manage, and contain disputes before they become violent in research projects. Many projects in Tanzania have been implemented without CPM consideration. Consequently, when conflicts arose, there was no mechanism to address these conflicts. One such project was the ReACCT project, which did not have a good ending. With the introduction of CPM in the Trans-SEC project, several differences in opinion that could have escalated into conflicts were resolved. Thus, all institutions involved in the pro-

ject have clearly benefited from the CPM-System. Several conflicts were resolved (before spiraling) relating to individuals within the Tanzanian institutions. Personally, CPM has changed how I react and respond to issues. The biggest lesson CPM taught me is 'TO LISTEN' and to not take a 'POSITION' on an issue. Based on my Trans-SEC experience, I strongly recommend that any new research project must have a CPM component as a part of it and that it should be well-funded from the outset.

Florian Haule, Tanzania Federation of Cooperatives (TFC)

CPM knowledge and understanding among team members has helped greatly to narrow the gap between consortium members from the North and the South, thus making the whole collaborative research team feel like one entity. In particular, it built up the confidence of African team members with respect to decision-making, thus enabling good cooperation. In addition, our own institution has profited immensely, as we could directly transfer CPM knowledge and skills to our working environment. We have also set up a conflict management training program for the members of TFC. Regarding the collaborative research project, the conflict contact point structure served particularly well. It proved easier for staff to consult contact points rather than taking it through normal organizational hierarchy or chain of command. Personally, I gained confidence in holding discussions and experienced the power of listening to problems first rather than jumping to find a solution.

Prof. Dr. Brigitte Kaufmann, German Institute for Tropical and Subtropical Agriculture (DITSL)

In collaborative research projects, relations between the different parties involved matter for project success. However, in most cases, this is not explicitly considered and, therefore, not openly addressed within the projects' lifetime. Conflict Prevention and Management (CPM) fills this gap. CPM supports building relationships between different project members, such as researchers, farmers, extension staff, and policy makers. Each individual has different roles and interests in the collaboration and face different constraints with regard to their participation. Trans-SEC is a large-scale research project with team members from an exceptionally wide variety of backgrounds and societal groups – all with the intention to create knowledge that will foster development in different domains, such as farming, science, and policy formulation. Well-functioning relationships between them are essential for information sharing and knowledge creation. Hence, relationships play an important role for creating a productive working atmosphere and achieving the project goals. It is DITSL's philosophy that projects must be inclusive of a wide variety of participants in order to effectively co-create knowledge that translates into development. Given its sound integration into the project, continuous CPM is a suitable instrument that fosters team formation and maturation. DITSL strongly recommends its incorporation into project design.

Dr. Stefan Sieber, Leibniz Centre for Agricultural Landscape Research (ZALF)

From the project manager's perspective, CPM helps reduce my overall workload with respect to the project, in terms of managing additional conflict related issues. It feels good to have a working mechanism and experts who dedicate their potential to increasing the quality of collaboration and to establishing a good atmosphere. Moreover, potential, foreseeable, tensions are resolved in advance, helping build and sustain a fruitful and feasible project structure. As the principal coordinator, and responsible by contract to the ministries, I have to report to the donors. This particular role generates a need to permanently justify and market the research project. This pressure can also cause internal stress. From my perspective – through CPM activities and interventions – the pressure was substantially mitigated. I felt supported continuously and halfway through I knew that the entire consortium was motivated. The positive feedback gave me the confidence that Trans-SEC will be successful. I will never work without CPM in the future.

Laetitia William, Agricultural Council of Tanzania (ACT)

Based on the fact that Trans-SEC project is a multi-cultural project, involving people of different professions, expertise, fields of study, education levels, and ethnicities, its implementation would have been difficult without CPM. Each institute and research team has its own interests, needs, and wants, which sometimes may conflict with each other, thus causing issues between parties. But with CPM, each emerging issue was settled in an amicable way without causing too much conflict. From this CPM, my organization has learned a lot,

especially for resolving employees-related conflicts. Typically, in any work place where people have different origins and cultures, conflicts, however small, will arise between parties. For my office, CPM taught us how to resolve these small issues calmly. The effects of CPM are not limited to the Trans-SEC project, but rather expand to the communities where we live. As a leader in the community group where I live, CPM has helped me resolve many issues that emerge in the course of fulfilling my responsibilities as a leader. Thus, the lessons of CPM support not just our professional life, but also our personal life; and therefore I strongly recommend it to be used in the design of future projects like Trans-SEC.

Dr. Frieder Graef, Leibniz Centre for Agricultural Landscape Research (ZALF)

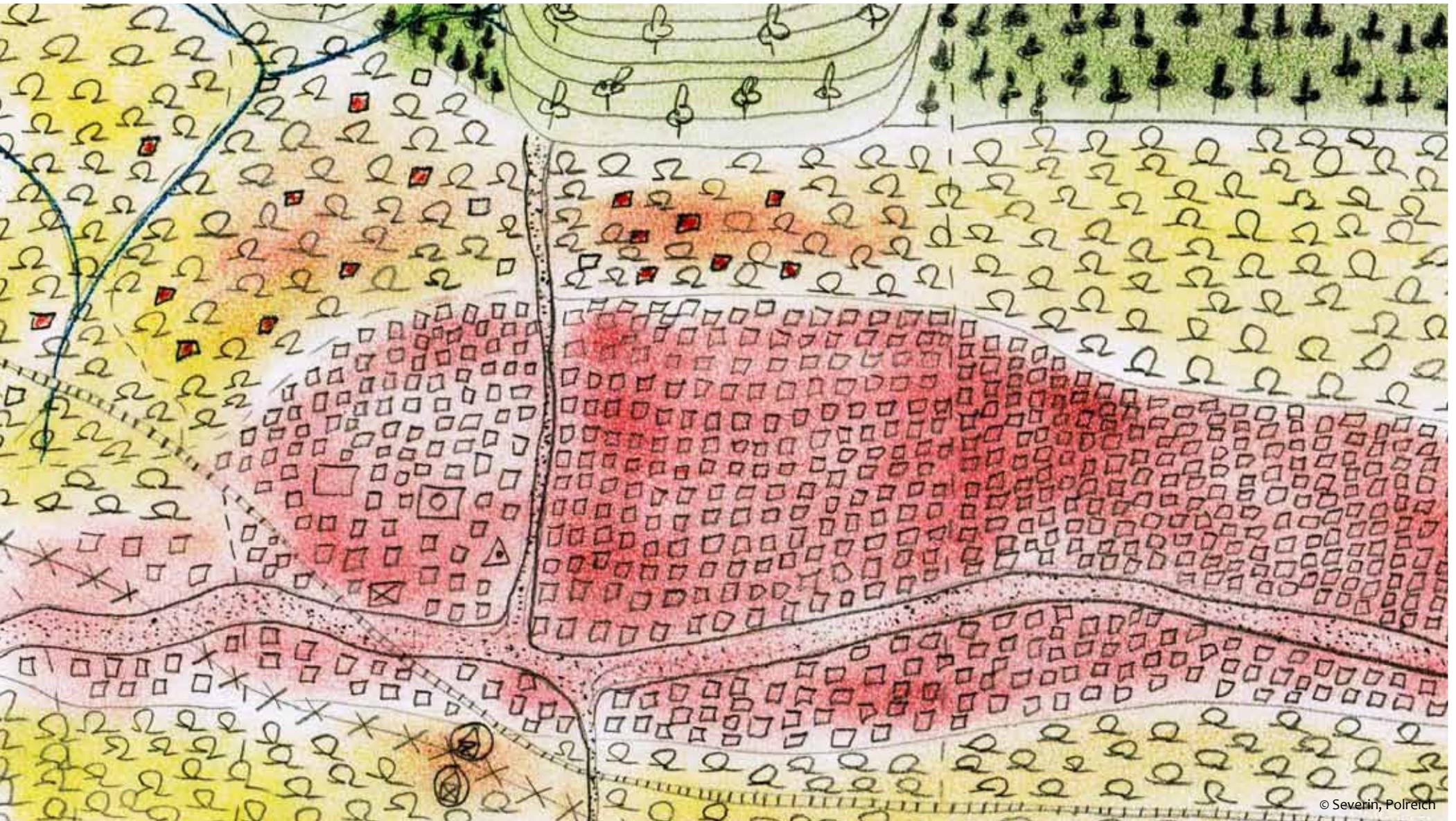
As the scientific project coordinator, I found CPM helped a lot in facilitating procedures and communication among partner institutions and colleagues in situations where communication would have otherwise completely stopped or been reduced. I experienced this across all institutions and hierarchical levels, as well as across multiple cultures. CPM made a difference in how tense and pressing issues were dealt with on a personal level and how they were communicated between two or more persons. The entire research project benefitted from the supporting procedures, protocols, responsibilities, and activities. CPM experiences will have a long-term effect, benefitting all the individuals and partner institutions involved. They may wish to implement CPM in future projects; however, it needs to be thoughtfully adapted to each individual setting. The main recommendations for other projects are: a) keep a diversity of options for CPM in terms of persons to be contacted; b) bring different cultures together and make them aware of different com-



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Nyamizi Bundala, Scale-N Status Conference, Germany (Berlin) 2017

munication habits and barriers; c) make people repeatedly aware of protocols for conflict cases; and d) raise awareness that there is no right or wrong in communication but rather differences among persons and cultures that need understanding and, if possible, agreements for routines.



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Participatory Landuse Map, Tanzania (Fulwe) 2011

Leibniz Centre for Agricultural Landscape Research (ZALF) Institute of Socio-Economics (Germany)

Katharina Löhr, Dr. Stefan Sieber

The Leibniz Centre for Agricultural Landscape Research (ZALF) is a Leibniz Association institute. ZALF's mission is to scientifically explain causal relationships in agricultural landscapes and to provide society with a knowledge-base for the sustainable use of agricultural landscapes through excellent research. Unlike natural landscapes, agricultural landscapes are shaped by its use and its users. The research at ZALF reflects the social demands placed on agricultural landscapes and its effects. ZALF is increasingly focusing its research on the Grand Societal Challenges relevant in the context of agricultural landscapes, such as climate change, food security, and the protection of biodiversity. According to its statutes, ZALF serves "the public welfare by communicating scientific insights to the relevant sections of the population, technical communities and business circles." ZALF research stands explicitly for scientific excellence and social relevance.

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Institute of Conflict Management (IKM), European University Viadrina Frankfurt (Oder) (Germany)

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The Institute of Conflict Management at European University Viadrina Frankfurt (Oder) is committed to the goal of establishing and developing interest based methods of conflict handling in society and

to fostering new applications. In the spirit of an action oriented idea of science, the Institute provides stimuli for practical action with targeted projects and specific research contributions, while also supporting social developments in conflict management. In this respect, the Institute is active in the fields of universities and research institutions, justice, economy, and international peace processes.

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For more than 50 years, the Centre for Rural Development (Seminar für Ländliche Entwicklung, SLE) has been engaged in international cooperation. The services that SLE offers range from its graduate study program, to advanced training courses for international specialists in Berlin, as well as practice-oriented research and advisory services for development organizations and universities. The SLE's many years of experience and its close connection to the Humboldt-University of Berlin contribute to the high academic standard of its approaches and methods, the empirical rigor of its analyses, as well as the practical applicability of its consulting advice.

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Prof. Dr. Henry Mahoo

The Sokoine University of Agriculture (SUA) was inaugurated in July 1, 1984. Following the restructuring of its management and organization structure in 2015, SUA has four Colleges, one School, and one Faculty: the College of Agriculture, College of Social Sciences and Humanities, College of Forestry Wildlife and Tourism, College of Veterinary and Medical Sciences (CVMS), School of Agricultural Economics and Business Studies, and Faculty of Science (FoS). SUA is guided by the University's Vision and Mission: The Vision of the University is "to become a centre of excellence and a valued member of the global academic community in agriculture and other related fields, with emphasis on impacting practical skills, entrepreneurship, research and integration of basic and applied knowledge in an environmentally friendly manner." The Vision is guided through the Mission, which is "to promote development through training, research, extension, provision of services to the public and private sector in an environmentally friendly manner."

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 Round Table Mediation and Conflict Management of the German Economy:
<http://www.rtmkm.de/home/welcome/>
 CPM-Systems in Research:
<https://www.youtube.com/watch?v=8ug8A2i3uKE>

