



Brussels, 26 February 2016

COST

DECISION

Subject: **Memorandum of Understanding for the implementation of the COST Action “Rationing – Missed Nursing care: An international and multidimensional problem” (RANCARE) CA15208**

The COST Member Countries and/or the COST Cooperating State will find attached the Memorandum of Understanding for the COST Action Rationing – Missed Nursing care: An international and multidimensional problem approved by the Committee of Senior Officials through written procedure on 26 February 2016.



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MEMORANDUM OF UNDERSTANDING

For the implementation of a COST Action designated as

COST Action CA15208

RATIONING – MISSED NURSING CARE: AN INTERNATIONAL AND MULTIDIMENSIONAL PROBLEM (RANCARE)

The COST Member Countries and/or the COST Cooperating State, accepting the present Memorandum of Understanding (MoU) wish to undertake joint activities of mutual interest and declare their common intention to participate in the COST Action (the Action), referred to above and described in the Technical Annex of this MoU.

The Action will be carried out in accordance with the set of COST Implementation Rules approved by the Committee of Senior Officials (CSO), or any new document amending or replacing them:

- a. "Rules for Participation in and Implementation of COST Activities" (COST 132/14);
- b. "COST Action Proposal Submission, Evaluation, Selection and Approval" (COST 133/14);
- c. "COST Action Management, Monitoring and Final Assessment" (COST 134/14);
- d. "COST International Cooperation and Specific Organisations Participation" (COST 135/14).

The main aim and objective of the Action is to facilitate discussion about rationing of nursing care based on a cross-national approach with implications for practice and professional development. This will be achieved by advancing collaboration and networking by integrating different disciplines including nursing, ethics, moral philosophy and health care studies.. This will be achieved through the specific objectives detailed in the Technical Annex.

The economic dimension of the activities carried out under the Action has been estimated, on the basis of information available during the planning of the Action, at EUR 60 million in 2015.

The MoU will enter into force once at least five (5) COST Member Countries and/or COST Cooperating State have accepted it, and the corresponding Management Committee Members have been appointed, as described in the CSO Decision COST 134/14.

The COST Action will start from the date of the first Management Committee meeting and shall be implemented for a period of four (4) years, unless an extension is approved by the CSO following the procedure described in the CSO Decision COST 134/14.

OVERVIEW
Summary

Rationing of nursing care occurs when resources are not sufficient to provide necessary care to all patients. The reasons for this phenomenon include staff reductions, increased demands for care due to the technological advancements, more treatment options, more informed service users, all requiring more time and attention from care professionals. Rationing of nursing care may also occur due to particular approaches of nurses' clinical judgment and knowledge in allocating the resources, and the wider value basis of the society on care. As a result, fundamental patient needs may not be fulfilled and human rights linked to discrimination may be affected.

In view of the increasing evidence indicating a negative effect of nursing rationing on patient outcomes, the fragmented work on the complexity of the topic as well as the gaps regarding issues such as ethics, methodology and patient safety, this Action will enable and facilitate internationally coordinated exchange of expertise and knowledge for both research and clinical practice at European and international level.

This Action will facilitate a debate on the conceptualisation of rationing and the methodological challenges in investigating and monitoring the phenomenon and the development and evaluation of intervention methods. It will also facilitate stakeholders to develop a responsive research agenda that identifies challenges and innovative cost-effective and patient-centered solutions associated with care rationing. It will enable research and policy synergies by drawing out the implications of nursing rationing across countries and identify innovative delivery models and strategies with an overall aim to address patient needs.

Areas of Expertise Relevant for the Action <ul style="list-style-type: none"> ● Health Sciences: Nursing ● Health Sciences: Health services, health care research ● Health Sciences: Medical ethics 	Keywords <ul style="list-style-type: none"> ● NURSING CARE RATIONING ● MISSED NURSING CARE ● CLINICAL DECISION MAKING IN NURSING ● NURSING CARE PRIORITIES
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Specific Objectives

To achieve the main objective described in this MoU, the following specific objectives shall be accomplished:

Research Coordination

- To further develop the theoretical conceptualization of rationing of nursing care and develop a common understanding of its definition through a more in-depth discussion of the complexities of the phenomenon.
- Development of knowledge about system factors related to rationing of nursing care and new research directions.
- Encourage discussion on patient safety and the implications for nursing curriculum.



- To encourage development of knowledge about the ethical dimensions of rationing of nursing care.
- To facilitate discussion and further knowledge about the competencies required for training in decision-making and clinical prioritization in nursing care.
- To compare assessment methods and methodology investigating rationing of nursing care.
- To identify theoretically and empirically-based interventions.
- To disseminate research results to stakeholders (nurse professional bodies, unions, patient associations, hospital managers, policy makers) and the general public.

Capacity Building

- To create a network to foster knowledge exchange and dissemination of good practices at European and International level.
- To provide a platform to develop a joint research agenda.
- To encourage the development of Early Stage Researchers (ESRs).
- To bridge academic, educational and clinical expertise to explore and develop new innovative approaches to train student nurses and clinical nursing staff.





1. S&T EXCELLENCE

1.1. Challenge

1.1.1. Description of the Challenge (Main Aim)

Rationing of nursing care, based on a dominating view, occurs when resources are not sufficient to provide necessary care to all patients. Several reasons have led to this phenomenon such as staff reductions, the increased demands for care due to the technological advancements, more treatment options, more informed service users, all demanding more time and attention from care professionals. Rationing of nursing care may also occur due to particular approaches to care professionals' clinical judgment and knowledge in allocating the resources and the wider value basis of the society on care. Evidence indicates that the prevalence of rationing is quite high among nurses in acute care hospitals internationally (55-98%) and is consistently associated with negative patient, nurse and organizational outcomes. Fundamental patient needs may not be fulfilled, while patient outcomes include patient falls, nosocomial infections, decreased nurse-reported care quality and decreased patient satisfaction. Nurse and organisational-related outcomes include increased staff turnover, decreased job and occupational satisfaction, and increased intent to leave nursing. Within the limitations of scarcity, nurses' decisions may also challenge their professional values leading to role conflicts, feelings of guilt, distress and difficulty in fulfilling their role in a morally accepted way.

The terminology in the field of nursing care rationing is inconsistent. The term 'rationing of nursing care' is used interchangeably with missed nursing care, implicit rationing of care, prioritization, nursing care left undone, unmet care needs or unfinished care. Most definitions of rationing cluster around the idea of denying potentially beneficial treatment to a patient on the grounds of scarcity raising social, ethical and political debates. Although such a range of terms may be viewed as enriching the literature, it is unclear how they should be compared and whether they suggest any variation in the conceptualization of rationing and subsequent development of interventions and policies to address it.

Though rationing of healthcare is widely acknowledged and discussed in the medical profession, rationing of nursing care is a less studied phenomenon and it is mostly investigated within the framework of scarcity of resources, cost reductions and economic constraints. Nursing is viewed as a constant target for cost reduction; however, nursing staffing cuts may adversely affect patient outcomes and consequently lead to even higher costs. Recent research has indicated a link between staff reduction, increasing nursing staff workload and patient hospital mortality. Although this perspective may provide partly an explanation of the problem, a more in-depth study of the concept has demonstrated that this is a multidimensional issue encompassing environmental, political, social, ethical, philosophical and cognitive elements which are not captured, discussed or investigated in the literature. Related to this is the multidisciplinary nature of the phenomenon that requires professionals from various backgrounds to work in a new framework, sharing values, duties, attitudes and knowledge. The current literature appears to be fragmented, based on work from researchers confined to a single country or bi-country context, and not capturing the multilevel complexity of rationing. Furthermore, one perspective may consider rationing as a process and missed care as the outcome that may or may not result from reasons other than nurses' decision to delay or not to perform certain activities. It will be fruitful and beneficial for research and clinical practice to develop a common understanding and enhance existing work in mapping various differences, if any, and commonalities in the analysis of rationing.

Other issues include the ambiguity regarding the factors and the extent to which they can initiate and/or increase rationing such as a) individual-level nurse factors e.g. nurse experience and education and the impact on decision-making and clinical judgment process, the adequacy to prioritize necessary care in the most appropriate way; b) individual-level patient factors e.g. signs,



cues, acuity and stability of the patient situation and health status; c) work environment factors e.g. leadership, adequate staff and skill mix, teamwork and the impact on the decision-making and rationing processes. Furthermore, rationing is related to nurses' moral strain that may develop due to the conflict in prioritizing care, and/or delaying or omitting certain elements of care that is beneficial and of great value to patients. There is no discussion regarding the ethical perspective, either nurses' or patients', and the moral meaning of rationing especially regarding the essence of justice, equality in care, patient dignity and the values when prioritizing. Equally important, there is no discussion on how human rights may be affected as basic care is omitted, particularly if this is linked to discrimination based on age, cognitive impairment, severity and chronicity of the condition. Additionally, rationing of nursing care may also affect the families, which are sometimes forced or invited to provide care for their relatives, compensating for the scarcity of resources. Therefore there is a need also to study the family's contribution, the amount of care they offer daily in the hospital context, as well as the burden and family role in mediating negative outcomes on patients.

Another area with hardly robust evidence are intervention studies and consequently strategies to minimize the causes and prevent the negative impact of rationing on patient safety and quality of care. As part of the wider discussion regarding interventions for rationing, is zero tolerance to rationing of nursing care and if so, whether this is a realistic, feasible and cost-effective goal. There is hardly any dialogue into the extent to which rationing of nursing care may be accepted as a pragmatic phenomenon that cannot be avoided considering the ongoing restrictions of health care resources, and consequently consider the impact of such position on a wide range of dimensions such as ethics, patient outcomes, nursing training, safety guidelines, supervision, and cost. Methodologically-wise, the majority of the work investigating the extent of rationing and subsequent outcomes has been based on self-report measures such as questionnaires, one-to-one interviews, and focus-groups predominantly from health care professionals (nurses, care assistants). The lack of a range of other approaches creates a possible threat of resource bias to the validity of identified relationships between rationing, preceding factors and outcomes.

The overall aim of this Action is to facilitate discussion about rationing of nursing care based on a cross-national comparative approach with implications for practice and professional development. This will be achieved by advancing collaboration and networking, and by integrating different disciplines and approaches including nursing, ethics and moral philosophy, health care studies in general, economics and social policy.

1.1.2. Relevance and timeliness

The aforementioned challenges are considered as both relevant and timely. Considering the increasing calls for economic reforms in healthcare in view of the ageing population, the subsequent increase in co-morbidities and healthcare needs, the nursing staff turnover, and the recommendations for patient safety, this Action is timely, with both scientific, educational and policy significance. It will help to fill gaps in policy, education and research by providing cross-national analysis of rationing of nursing care by bringing scholars from various COST and international partner countries together. Such a network will allow exchange of expertise and knowledge, experience, good practices and enable the development of future collaborations. Currently, researchers and clinicians who work in ongoing international projects are investigating rationing from a single managerial perspective. Current efforts thus do not capture the complexity and the multi-dimensionality of rationing of care. In addition, the delivery of nursing care has changed over the years with the increased acuity of patients, shorter hospital stay and the increasing importance of the discharge plan. Subsequently, nurses are now required to think differently on how to allocate care in less time yet there is no discussion on how to translate this into practice. Another change noted in the nursing profession concerns the education and training of nurses. The modernisation of Directive 2005/36/EC created the need to update the education requirements of the nursing profession in order to take into account the advancements in nursing science. The new Directive 2013/55/EU includes a set of 8 competencies that establish the minimum educational requirements

for nurses responsible for general care; patient safety, decision making and human rights are key issues of the competency areas.

This Action will build on existing work, developed by some of the partners of this network, to provide opportunities to exchange expertise and knowledge among scholars regarding patient safety in nurse training, the implications for rationing in the nursing curriculum and what aspects may be modified. Cross-national comparison will enable comparison of policies regarding the organisational process of nursing at the hospital level, skill-mix, approaches to care and decision-making tools and processes.

1.2. Specific Objectives

1.2.1. Research Coordination Objectives

a) To further develop the theoretical conceptualization of rationing of nursing care and develop a common understanding of its definition. Although the literature related to rationing of nursing care has grown significantly over the last decade, the theoretical underpinnings of the work are still at early stage with no in-depth discussion to capture the multi-dimensionality and complex interaction of the various factors involved. The focus is mainly on the organizational antecedents of the phenomenon and there is very little work about the underlying processes and value considerations in the provision of nursing care e.g. ethical dilemmas. Furthermore, there are various terms being used interchangeably to describe rationing, with uncertainty about the underlying meaning and subsequent implications for the interpretation of findings. Such a goal cannot be achieved without international coordination due to the variability of expertise of the stakeholders and the fact that most of the work is based in a single country or small-group networks. This objective will be implemented via the organisation of 4 workshops among the stakeholders during the first two years of the Action in order to establish a more in-depth understanding of the complexities of the issue and facilitate the direction of the discussion for the subsequent objectives of the Action. In addition, the production of a discussion paper at the final year to allow input from all relevant stakeholders will indicate that this objective has been fulfilled.

b) Development of knowledge about system factors related to rationing of nursing care and new directions for research. There is increasing evidence about the role of system or organisation factors and their link to rationing but there is hardly any discussion, particularly at European level, about the implications for patient-staff ratio, skill-mix and the consequent economic aspects. Another area with some evidence, albeit fragmented, concerns decision-making process involved in prioritization of care. This is due to language barriers and different health systems thus necessitating an international collaboration to initiate discussion and development of new directions for research. This Action will enable 2 international workshops on organizational factors at year 2 and 3, 2 international workshops on the decision-making process at year 2 and 3, and 2 discussion papers at year 4 to enable input from all relevant stakeholders.

c) Encourage discussion on patient safety as related to rationing of nursing care, and the implications for nursing studies curriculum. Considering the link between rationing of nursing care to patient safety and the international guidelines addressing patient safety in the educational curriculums (WHO 2011 Patient Safety Curriculum guide), there is hardly any discussion on integrating patient safety and nursing care rationing in nursing studies, and any efforts appear constrained in individual academic institutions. This Action will provide an international platform for dialogue in identifying evidence-based practices of integrating patient safety in nursing curricula and preparation of students for their work in the clinical field. This will be achieved via 2 workshops at year 1 and 2, involving relevant stakeholders such as in education and training, 2 Short-term Scientific Missions (STSMs) linking professionals and academics in year 1 and 2, 2 training manuals about patient safety and rationing in clinical practice produced at year 4, and 2 Training Schools (TS) for ESRs and nursing staff at year 3 and 4, a policy paper on patient safety training and rationing at

year 4, 10 local workshops (in 10 different participating countries) to clinical staff nurses, nurse managers and government bodies during years 2-3 of the Action.

d) To encourage development of knowledge about the ethical dimensions of rationing of nursing care. Currently there is very little work investigating the ethical aspects involved in rationing of nursing care and there is an urgent need for international collaboration and collective discussion on the implications for human rights (e.g. dignity, discrimination) as well as the feasibility of zero-tolerance towards rationing, and the implications for policy-makers and nursing care guidelines. There will be 3 international workshops in year 1 and 2 bringing together scholars and practitioners, 2 TS for ESRs and other researchers in year 2 and 3, a review paper on the multidimensionality of ethics of nursing care rationing in year 2, and a consensus statement about ethics in rationing of nursing care at year 4.

e) To facilitate discussion and further knowledge about the competencies required for training in decision-making process and clinical prioritization in nursing care. Although rationing appears to be the outcome of a decision-making process concerning the daily delivery of nursing care activities, there is hardly any discussion about addressing such process in the training provided to the both nursing students and clinical staff and the competencies required for such training. This objective will be implemented via the organisation of 2 international workshops among the stakeholders and 2 STSMs in the first 2 years of the Action, 1 review article on the decision-making process and competencies involved for training purposes.

f) To compare assessment methods and methodology investigating rationing of nursing care. The majority of the work so far has been based on cross-sectional designs and qualitative work such as one-to-one interviews. There is a need to extend the range of methods to elicit data that can advance our understanding of rationing of nursing care, as well as address biases such as social desirability and subjectivity. There will be 3 international workshops to facilitate discussion and exchange of expertise at year 1 and year 2, 2 TS for ESRs and other researchers at year 2 and year 3, and a discussion paper at the final year of this Action.

g) To identify theoretically and empirically-based interventions. There is some evidence of interventions aiming at various aspects of rationing of nursing care, however more work is required to gain a complete insight of the work so far. This will also help to develop new knowledge for potential new strategies addressing rationing such as improving patient safety in the clinical setting. Such effort is feasible via international collaboration, as research currently takes place in isolated teams, that will increase the prospect of greater horizontal communication including exchange of ideas for interventions that meet the demands of country-specific health systems, infrastructure and expertise. There will be 6 international workshops during the first 3 years of this Action, 2 TS for ESRs and 1 scientific article at the final year of this Action.

h) To disseminate research results to stakeholders (nurse professional bodies, unions, patient associations, hospital managers, policy makers) and the general public via publications of scientific and non-scientific articles, training manuals, and conference presentations throughout the duration of the lifetime of this Action.

1.2.2. Capacity-building Objectives

a) To create a network to foster knowledge exchange and dissemination of good practices at European and International level. Much of the research currently conducted on rationing of nursing care is produced by sole research teams confined in single countries or from single disciplines. Yet the nature and the extent of rationing of nursing care appears to be consistent across European and non-European countries. This Action will provide a more systematic and co-ordinated communication between the various teams, and enable them to form the basis for future collaboration and strengthening of the work on this topic. This will be achieved by regular meetings either face-to-face or electronically, STSMs, TS and workshops throughout the duration of the Action and via 11 publications between Year 2 and Year 4. Furthermore, there will be eLetters twice a year throughout the duration of this Action reporting news and progress of the Action activities to all stakeholders

b) To provide a platform to develop a joint research agenda. Rationing of nursing care cuts across various disciplines and teams, nursing and non-nursing such as allied health care professionals, patient associations, policy makers and unions. However, there is no ongoing communication between experts and other stakeholders to collectively identify gaps in knowledge and foster co-ordinated and collaborative research. This Action will act as a platform to integrate knowledge on rationing and promote the development of joint research plans. This will be achieved via the invitation of COST members over time, 24 International workshops, 2 conferences, and WG meetings throughout the duration of the Action.

c) To encourage the development of Early Stage Researchers (ESRs), and teams from countries with potential for furthering their work and/or expertise in the field. There is a relative lack of training in the field of rationing and its various dimensions, and existing training and research is typically confined to individual countries. This Action will build on existing educational networks and infrastructure from partners of this network and the objective will be achieved via the training and mentoring of ESRs and other groups (e.g. researchers, nurse professionals, nurse managers) interested in the field with 8 TS and 4 STSMs to take place during year 1 to year 3 of the Action. The ESRs will share their experiences from the research and training activities during the last conference at year 4.

d) To bridge academic, educational and clinical expertise to explore and develop new innovative approaches to train student nurses and clinical nursing staff. There is an emerging literature indicating the role of training to improve health care quality and patient safety such as via identification of errors, minimized tolerance to care rationing, decision-making and clinical judgment process and tools. This can be achieved by 10 local workshops and 8 TS during year 2 and 3 of this Action.

1.3. Progress beyond the state-of-the-art and Innovation Potential

1.3.1. Description of the state-of-the-art

There is increasing interest on rationing of nursing care with accumulating evidence from research and quality control work linking rationing to negative patient outcomes that jeopardize patient safety. Various European and international guidelines set standards for the provision of quality and safe care, yet the potential links with rationing are unclear. Furthermore, the literature on rationing so far has a predominant focus on the limited resources and cost reductions, and rationing of nursing care is viewed as one outcome of these factors. Nonetheless, there is a pressing need to investigate and discuss the issue within a more complex, multidimensional and multidisciplinary framework including the interaction with factors such as ethics, philosophy of care, social and environmental aspects, and individual cognitive processing.

1.3.2. Progress beyond the state-of-the-art

In view of the increasing evidence indicating a negative effect of rationing of nursing care on patient outcomes, the fragmented work on the complexity of the topic as well as the gaps regarding issues such as ethics, methodology and patient safety, this Action will enable and facilitate internationally coordinated exchange of expertise and knowledge for both research and clinical practice at European and international level. Through the collective work of experts and building on the expertise and existing work from certain partners of this network, the emerging collaboration will help in education and training of ESRs, clinical staff and policy-makers.

1.3.3. Innovation in tackling the challenge

The activities of this Action will create a number of innovation prospects including: further the concept of rationing of nursing care taking into consideration its multi-dimensionality and the underlying processes; discussion of ideas introducing technological innovation in assisting delivery of nursing care tasks aiming for subsequent funding beyond the lifetime of this Action to further develop the concepts into tangible products; enhance the understanding of the decision-making and clinical judgement processes involved in everyday nursing activities at the clinical level, and discuss ideas

for decision-making tools that could help clinical staff to prioritise their work with the minimum risk to the patient; enrich the knowledge on the dynamic interplay between the different system factors of the nursing work environment (e.g. nursing leadership, staffing adequacy) that could contribute towards rationing; develop training sessions for both researchers at junior and advanced level as well as clinical staff regarding the ethics of rationing and patient safety; develop innovative suggestions and concepts for managerial and administration knowledge and training at European level; discuss and explore the links between rationing and patient safety in the framework of healthcare costs and budget cuts, and provide subsequent workshops to current partners as well as to future stakeholders after this Action concludes.

1.4. Added value of networking

1.4.1. In relation to the Challenge

This Action will enable to create networking activities (e.g. workshops, TS, conferences) so as to jointly develop ideas and new initiatives on the issue of rationing of nursing care. The evidence on rationing of nursing care has increased in the last years, nevertheless there is a range of issues that are hardly touched upon and not yet well understood, particularly the multi-dimensionality of the topic and the arising implications that makes research on this topic more challenging. In order to discuss and address these limitations and challenges, it is important to bring together the various experts, stakeholders in this field as well as hospital care users to work together on this issue. The accumulated expertise, knowledge and experience, will enable further investigation of the current under-researched and not well understood aspects of rationing of nursing care, and provide further insight into examining this issue, for example exchange of knowledge and experience of possible techniques in addressing rationing. Furthermore, there are relatively small research teams working on this issue in isolation in various EU and non-EU countries that appear to share similar questions and challenges. The networking opportunities provided via this Action will enable individuals and teams to join forces, form collaborations and share expertise, ideas, skills and knowledge, foster the development of strategies to support the clinicians and managers in managing and handling these issues in clinical practice, and provide forums for discussion and training that aim to create momentum for advancing the field and extend the knowledge.

1.4.2. In relation to existing efforts at European and/or international level

Although the issue of rationing has been identified and addressed in the literature over 15 years ago, the advancement of work since then does not capture the increasing complexity of the area. In the past few years a number of international projects have been initiated, and this Action builds upon current and past programmes. It complements a European Union (EU) funded study with registered nurses; the research consortium brought together researchers from European countries and countries outside the EU. One of the main findings of this consortium showed that nursing care left undone was prevalent across all countries involved and it was associated with nurse-related organizational factors and patient experiences with care. Similar patterns of nursing care left undone were recorded across a cross-section of European hospitals, suggesting that nurses develop informal task hierarchies to facilitate important patient-care decisions. This Action will also build on existing work related to the European Patient Forum (EPF) e.g. a multidisciplinary approach aiming to contribute significantly towards a sustainable and affordable healthcare as well as projects for self-care. The results from such international studies will facilitate the discussion in this Action about the way forward, such as the type of interventions that can be developed i.e. at individual level (patients, nurses), organisational (e.g. nurse managers, nursing care plans), policy-level (e.g. job description, task identity, nursing assistants, task shifting processes undertaken by different governments in the EU) and within the society (views about nursing profession, identity of nursing profession) while accounting for the differences between countries and health systems.

2. IMPACT

2.1. Expected Impact

2.1.1. Short-term and long-term scientific, technological, and/or socioeconomic impacts

This Action envisages the following beneficial impact at scientific, socio-economic, and technological levels:

Scientific level: This Action will enhance the level and quality of research on rationing by facilitating a debate on the conceptualisation of rationing and the methodological challenges in investigating and monitoring the phenomenon, as well as the development and evaluation of intervention methods. It will provide the opportunity to enhance the level of research in currently neglected aspects of rationing such as the ethical dimensions, and decision-making in clinical practice. Furthermore, it will establish the mechanisms for the training of both emerging and experienced researchers, e.g. via TS and workshops; enable a vertical and horizontal exchange of ideas, skills and knowledge for potential research collaborations and dissemination of findings. This Action will also provide opportunities for networking for a range of experts (researchers, policy-makers, educators, patient associations, managers) to facilitate the transformation and implementation of knowledge into action. Based on such networking, this Action will also encourage the initiation of research proposals in research and policy on rationing of nursing care for continued collaboration beyond the lifetime of this Action.

Socio-economic level: This Action will facilitate stakeholders to identify gaps in knowledge and develop a responsive research agenda that identifies challenges and innovative cost-effective and patient-centered solutions associated with care rationing. It will enable research and policy synergies by drawing out the implications of nursing rationing across countries (e.g. health-related, quality of life, economic, ethical, managerial) and identify innovative delivery models and strategies that can be tested with an overall aim to address patient needs. It will enhance capacity-building and discussion of findings outside academic institutions including clinical practice, as well as with other stakeholders such as trade unions, policy-makers, hospital management, and patient associations. It will stimulate ongoing debate about the provision of quality of healthcare, and the policies and mechanisms designed to provide and monitor standards of care, and discussion about the policies and practices in monitoring and responding to rationing of nursing care from various perspectives at European and international level. It will also encourage exchange of vital, yet neglected, information about the cost of contribution from the family and/or friends towards the patients when there is missed nursing care and the family and/or friends need to step in to cover the gap.

Technological-level: This Action will facilitate the development of an electronic platform to add evidence-based decision-making tools for clinical and academic purposes; such tools may assist in identifying priorities in care, thus minimising any adverse impact on patients. It will also create the opportunity to discuss the value, the significance and the practicalities of developing a shared platform to report problems at the clinical level, as well as the feasibility of electronic programmes to address ongoing problems at the ward e.g. the daily monitoring of nursing tasks and the distribution of workload or staff to reduce adverse effects on patients. Furthermore, it will provide the opportunity to discuss how technology can assist towards specific nursing tasks by developing specific products which in the long-term can be developed and tested after the end of this Action.

2.2. Measures to Maximise Impact

2.2.1. Plan for involving the most relevant stakeholders

The most relevant stakeholders of this Action are: academics and researchers active in various fields such as nursing, psychology, health economics, statistics and medical ethics. It also includes non-academic partners such as health care professionals i.e. nurses at various levels of expertise and managerial positions, trade unionists, policy-makers, government bodies, professional nursing organisations, educators, and patients' associations. The Action will bring together researchers from different countries and disciplines aiming to form collaborations and partnerships that will enable

scientific rigorous and empirically informed work. There will be particular effort to involve ESRs and PhD students through workshops, TS, conferences, mentoring, and discussion forums. Existing contacts with non-academic partners will be extended in inviting the various parties to participate in the Action, attend and contribute to national and international workshops and conferences, training materials, and in the dissemination via training and presentations. In addition, relevant experts from other disciplines e.g. social science, law - particularly on citizens'rights - will be invited to present, facilitate and/or provide training. All stakeholders will benefit from having access to the website and the electronic repository which will include scientific and position papers, recommended policies, and training manuals.

2.2.2. Dissemination and/or Exploitation Plan

The main methods of dissemination in this Action are: a) face-to-face contact, b) electronic communication, and c) publications.

Face-to-face dissemination will occur as follows: (1) Management Committee (MC) and Working Group (WG) meetings that will take place at least twice a year. (2) An interim and concluding conference will be organised during the duration of the Action to facilitate communication between the partners. (3) TS for both ESRs and experienced researchers. (4) TS for nurses and nurse managers. (5) STSMs will enable mobility between partners particularly ESRs. (6) Local workshops set up by WG members to communicate the goals and activities of the Action with local stakeholders.

Electronic communication will be implemented as follows: (1) E-mail, video- and teleconferencing will be used as a flexible communication means to enable ongoing and rapid communication between Action members. There will be eLetters for reporting news and progress to all stakeholders. (2) Information about the Action will be posted on the dedicated website of this Action. The website will act as a platform to provide updated information about the Action and other relevant links, host various documents and summaries from the WGs, and act as the portal for inviting potential stakeholders to register to the various face-to-face meetings e.g. local workshops and conferences. (3) Media communication and public announcements will be made by WG members to increase dissemination and public attention to the activities of the Action. Other means of social media such as blogs, facebook, and twitter will be used to maximise dissemination and debate.

Dissemination through publications will include the following: (1) Working papers, (2) Scientific reports, (3) Scientific publications, (4) WG proceedings, (5) Training manuals, (6) Edited book, (7) Accessible reports for the general public including health care professionals, (8) Policy reports.

2.3. Potential for Innovation versus Risk Level

2.3.1. Potential for scientific, technological and/or socioeconomic innovation breakthroughs

This Action has the potential for scientific innovation breakthrough through the development of a theoretical conceptualisation and understanding of the phenomenon under study. The contribution of technology in the development of ideas aiming to have a direct application to everyday nursing tasks at research and clinical level will give the potential for technological innovation inventions. Such innovation, if appropriately funded, can have significant impact both at science and society level with benefits for healthcare costs and key stakeholders such as the nursing staff, the patients, the family. Furthermore, articulating, exploring and examining issues of rationing of nursing care has the potential to bring into the light a practice that occurs and is happening largely without peer scrutiny, peer review or an identifiable evidence base. Exploration of this important topic, that is often directly linked with both the quality and safety of the care patients receive, will enable scrutiny of the extent of such practice internationally and help develop a framework and an appropriate set of tools (e.g. decision support tools and care assisting tools) to enable safe prioritisation of patient care needs. This Action will also assist in the development of an evidence-based decision-making approach to the rationing of nursing care in situations of scarcity of resources. This will help enhance

both the quality and safety of patient care internationally, thus lowering the risk levels associated with hospital care.

3. IMPLEMENTATION

3.1. Description of the Work Plan

3.1.1. Description of Working Groups – Provide for each WG the Objectives, Tasks, Activities, Milestones and Deliverables

This Action proposes four Working Groups (WGs) organised as follows:

Working Group 1 (WG): Conceptualisation of rationing and Research methodology

The objectives of WG1 are: **a)** to map and evaluate existing knowledge regarding the factors linked to rationing (e.g. decision-making in prioritizing care) and how these contribute to its conceptualisation, **b)** to examine the current evidence regarding the organisational and system factors related to rationing both at European and International level e.g. skill-mix, patient to nurse staffing ratio, patient safety, economic dimensions and impact on family, and their relationship to rationing of nursing care and its conceptualization, **c)** to develop a common understanding about the concept of rationing of nursing care by mapping the differences and commonalities in the terminology currently used to describe and analyse the phenomenon, **d)** to discuss the feasibility of techniques of data collection on rationing (e.g. observation, longitudinal, audio data), their opportunities and shortcomings particularly in relation to underreporting and social desirability bias, **e)** to report best practice examples on methodology.

The tasks of WG1: In-depth discussion of the concept of rationing and the methodological techniques used to investigate the issue; organisation of TS and writing of scientific papers. **The activities of WG1:** workshops, TS, writing of scientific papers.

Milestones (M):

- M1: 1st Management Committee Meeting assignment of WG Chairs (Year 1-Quarter 1)
- M2: 4 international workshops discussing conceptualization, terminology and fundamentals of care i.e. 2 workshops at Year 1 (Quarter 2 and 3) and Year 2 (Quarter 2 and 3)
- M3: 3 international workshops to discuss the various methodological issues arising from the research on rationing of nursing care (Year 1 - Quarter 4; Year 2 - Quarter 2; Year 2- Quarter 4)
- M4: 2 international workshops discussing the evidence of the range of organisational factors linked to rationing of nursing care at Year 2 (Quarter 3) and Year 3 (Quarter 2).
- M5: 2 international workshops discussing the decision-making process in clinical prioritization and the setting of research agenda, taking place at Year 2 (Quarter 4) and Year 3 (Quarter 3).
- M6: 2 TS for ESRs on methodological techniques (Year 2-Quarter 4; Year 3-Quarter 1)
- M7: a discussion paper on the conceptualization and terminology of rationing of nursing care (Year 4-Quarter 4)
- M8: a discussion paper about the methodological issues to be considered in an intervention on rationing of nursing care (Year 4- Quarter 4)
- M9: a scientific paper on the organisational factors lined to rationing and the way ahead (Year 4- Quarter 3)
- M10: policy paper on the links between patient safety and rationing of nursing care for the guidelines on the patient safety movement (Year 4- Quarter 3)
- M11: a scientific paper on the decision-making process involved in clinical judgment in nursing care (Year 4 - Quarter 4)
- M12: 8 WG meetings (Year 1-Year 4: Quarter 2 and Quarter 4)
- M13: 8 Short progress report to MC (Year 1- Year 4: Quarter 2 and Quarter 4).

Major deliverables: 1) Eleven international workshops hosting experts and relevant stakeholders from COST countries; 2) Two TS; 3) Four scientific papers; 4) Policy paper on rationing of nursing care and patient safety; 5) Minutes from the 8 WGs meetings; 6) 8 short progress reports.

Working Group 2 (WG): Evidence-based interventions and intervention design

The objectives of WG2 are: **a)** to identify theoretically and empirically-supported interventions on rationing of nursing care, **b)** to encourage discussion and analysis of the underlying factors that need to be considered in intervention designs, building from the arising work of WG1 including comparison of countries, characteristics of health care systems, target population i.e. individual- (e.g. patients, nurses), organisational- (nurse managers, nursing care plans) or policy-level (e.g. job description, job analysis, task identity, nursing assistants), **c)** to discuss the role of decision-making aids as intervention methods, and further develop evidence-based decision-making tools, **d)** to discuss the evidence for technological tools in monitoring rationing of nursing care, and building from WG1, which factors to be considered in intervention development, **e)** to discuss the role of technology in assisting towards nursing tasks and in relation to particular age groups e.g. elderly, **f)** to develop ideas about specific products, **e)** to encourage the development of an international research consortium to prepare proposals beyond the lifetime of this Action on the feasibility and testing of new devices.

The tasks of WG2: Discussion of the existing interventions addressing rationing of nursing care; the potential role of technology in decision-making aids and in assisting nursing tasks; organisation of workshops. **The activities of WG2:** Workshops and provision of training on the following areas: developing and evaluation of interventions on rationing of nursing care, the role of technology in intervention development, ideas for specific intervention techniques.

Milestones (M):

- M1: 1st Management Committee Meeting assignment of WG Chairs (Year 1-Quarter 1)
- M2: 2 international workshops examining the existing interventions (Year 1 - Quarter 2; Year 2-Quarter 2)
- M3: 4 international workshops discussing the factors to be targeted in future interventions and the role of technology in such interventions (Year 2-Quarter 1 and 3; Year 3 Quarter 1 and 3).
- M4: 2TS for ESRs on intervention development and evaluation (Year3-Quarter 4;Year4-Quarter 2)
- M5: 1 article about the evidence-based interventions (Year 4 - Quarter 4)
- M6: 8 WG meetings (Year 1-Year 4: Quarter 2 and Quarter 4)
- M7: 8 Short progress report to MC (Year 1- Year 4: Quarter 2 and Quarter 4).

Major deliverables: 1) Six International workshops; 2) Two TS; 3) Scientific publication; 4) Minutes from the 8 WGs meetings; 5) 8 short progress reports.

Working Group 3 (WG): The ethical dimension of rationing of nursing care

The objectives of WG3 are: **a)** to explore the deeper moral meaning of rationing within its ethical perspectives and outcomes, **b)** to facilitate discussion on the various dimensions of ethics related to rationing of nursing care and the impact on nurses (e.g. moral distress) and patients (e.g. dignity), **c)** to discuss the ethical, organisational, practical and economic aspects of zero tolerance to rationing and other alternative approaches, **d)** to discuss the implications on patients' and human rights including discrimination of care provision (e.g. towards particular age groups), **e)** to discuss the ethical and value principles underlying the decision-making process in clinical judgement, **f)** to analyse the ethical dimensions of family care as complementary or replacement to nursing care due to rationing, **g)** contrasting the central values of nursing with the complex practical realities of rationing.

The tasks of WG3: To organise a series of workshops for an in-depth analysis of the ethical perspectives of rationing of nursing care. **The activities of WG3:** A series of workshops and TS that will address the following: study of the international guidelines regarding patient and human rights; discussion of national and international public opinion documents concerning topics such as patient dignity; study of medical literature and law guidelines about rationing of care and lessons learned for rationing of nursing care in relation to national and international nursing scope of practice; organise a panel of international ethicists and other relevant stakeholders, as part of TS, to discuss and explore the ethical dimensions of vignette cases.

Milestones (M):

- M1: 1st Management Committee Meeting assignment of WG Chairs (Year 1-Quarter 1)
- M2: 3 international workshops to discuss the ethics of rationing of nursing care (Year 2-Quarter 1 and Quarter 4; Year 3-Quarter 2)
- M3: 2 TS for ESRs and other researchers about the ethical aspects of rationing and the arising implications (Year 2-Quarter 1; Year 3 -Quarter 3)
- M4: 1 review paper on the multidimensionality of ethics (Year 2-Quarter 4)
- M5: 1 Consensus statement about ethics in rationing of nursing care (Year 4-Quarter 2)
- M6: 8 WG meetings (Year 1-Year 4: Quarter 2 and Quarter 4)
- M7: 8 Short progress report to MC (Year 1- Year 4: Quarter 2 and Quarter 4).

Major deliverables: 1) 3 International workshops; 2) 2 TS; 3) A scientific publication; 4) Consensus statement; 5) Minutes from the 8 WG meetings; 6) 8 short progress reports

Working Group 4 (WG) : Educational issues and Training

The objectives of the WG4 are: **a)** to build upon the evidence of rationing of nursing care as related to patients' needs and safety, arising from WG1, and discuss the implications for teaching and for the nursing studies curriculum, **b)** to compare nursing curricula, both at European and International level, on patient safety teaching and exchange information on best practice, **c)** to discuss the competencies required for training in decision-making process and clinical prioritization both for the ESRs and clinical staff, **d)** to discuss nurse manager education to create environments that address and minimise rationing.

The tasks of WG4: to review the nursing curriculums on patient safety; organise workshops, and SSTMS. **The activities of WG4:** organisation of workshops to discuss and provide training to students and nurse professionals about the links of patient safety and rationing of nursing care; the decision-making process and clinical judgement in nursing training; the competencies required in the nursing curricula to address these areas.

Milestones (M):

- M1: 1st Management Committee Meeting assignment of WG Chairs (Year 1-Quarter 1)
- M2: 2 international workshops discussing patient safety and patient safety education and 2 SSTMs linking professionals and academics (Year 1 - Quarter 3; Year 2- Quarter 4)
- M3: 2 international workshops about training in decision-making process (Year 1-Quarter 2; Year 2-Quarter 3).
- M4: 4 STSMs linking professionals and academics on the issues of decision-making process and patient safety (Year 1-Quarter 4; Year 2-Quarter 4)
- M5: 10 local workshops for nurse professionals, policy-makers, and unions on the links between patient safety and rationing (Year 2-Quarter 1 to Year 3-Quarter 4)
- M6: 2 TS for ESRs and nursing staff about patient safety (Year 3-Quarter 1; Year 4-Quarter 2)
- M7: 1 review article on the decision-making processes and the nursing competencies for training purposes; 2 training manuals for nurses and nurse students regarding patient safety respectively; 1 policy-paper for training purposes about the links between patient safety and rationing (Year 4-Quarter 4)
- M8: 8 WG meetings (Year 1-Year 4: Quarter 2 and Quarter 4)
- M9: 8 Short progress report to MC (Year 1- Year 4: Quarter 2 and Quarter 4).

Major deliverables: 1) 4 International workshops; 2) 10 Local workshops; 3) 2 STSMs; 4) 2 TS; 5) 1 review article 6) 2 training manuals; 7) 1 Policy paper; 8) Minutes from 8 WG meetings; 9) 8 short progress reports

Horizontal Deliverables across WGs: (1) Development of a website by the Website Committee; the website will be used as an international resource for the study of nursing care rationing connecting a variety of stakeholders including academics, researchers, polic-makers, trade unions and non-government organisations in the field (Year 1-Quarter 2); **(2)** Development of a depository database of scientific literature, measures, strategies and interventions related to rationing of

nursing care that will be maintained and updated by the various WGs throughout the Action. The Website Committee will have the responsibility in setting it up (Year 1 - Quarter 4); (3) An edited book with the findings, discussion, and directions for future work (research, policy, management) from each WG; each chapter will address a different (or a combination of) aspect of rationing of nursing care as discussed in the WGs. The Coordination Committee (CC) will be responsible for collating the content (Year 4 - Quarter 4); (4) Production and distribution of eLetters to all stakeholders twice a year by the CC (Year 1-Year 4: Quarter 2 and Quarter 4). (5) the organisation of two conferences by the Dissemination Committee (Year 1-Quarter 4 and Year 4-Quarter 4) presenting the findings and the conclusions from all the activities and stakeholders.

3.1.2. GANTT Diagram

This is presented at the end of the document.

3.1.3. PERT (optional)

Not included.

3.1.4. Risk and Contingency Plans

The following risks may arise from the work plan of this COST Action:

a) The intellectual property (IPR) from the various deliverables may not be well defined and may cause uncertainty about the ownership. As a contingency plan a team will be developed comprising of the members of the Management Committee who are also members of the WGs (as explained later in section 3.2. 'Management structures and procedures') who will tackle any issues related to IPR; **b)** The network of this Action comprises of members from various working cultures, and disciplines with different theoretical underpinnings which may present challenges to develop consensus related to the set deliverables. Each WG leader will be responsible to develop a management procedure within each WG to identify such problems and communicate them during the WG meetings to tackle them.

3.2. Management structures and procedures

This Action will have the following structure:

The Management Committee (MC) will comprise of up to two representatives from each of the participating countries; the MC will be led by the Chair and the Vice Chair, who will act to ensure the coordination, implementation, and management of the Action as detailed in the Rules of Procedures for implementing COST Actions. The MC will supervise the appropriate allocation and use of funds, be responsible for the overall strategy of the Action, coordinate the international network and platform activities, and evaluate new applicants. A member of the MC will also be a member of at least one WG. This will be decided at the first meeting of the MC. The MC will meet twice a year (at least one meeting will be face-to-face) annually, although more frequent MC meetings will be held if deemed necessary. At the initial meeting, the MC will set up the Training Committee (TC), WGs, the Dissemination Committee (DC), Website Committee (WC), and the Coordination Committee (CC). The MC will also oversee that the results achieved during the Action will be presented in regular progress reports that will contain information on all of the Action's activities. The various committees (WGs, TC, DC, WC, and CC) will each submit a short annual report activities to the MC. These reports will aim to monitor the level of achievement of the Action's objectives and whether performance-related measures and adjustments are necessary. They will also form the basis for feedback from the COST Association. The MC will be responsible for the gender balance in all committees and in the participation of the various activities. Taking into consideration that the majority of ESRs and clinical staff nurses are females whereas at the higher ranks of both academic and clinical managerial level the majority of individuals are males, this Action aims at inviting individuals from many different levels to join the MC to ensure a more equal gender distribution when

setting the above committees. This Action aims for equal gender inclusion and treatment. Selections will be made to participate in TS, STSMs and ESRs, and one of the criteria will be to consider gender balance when finalising selected participants. The overall work of this Action aims for equal gender inclusion and treatment.

The Training Committee (TC) will oversee the organisation of TS, Workshops, and the STSMs. The TC will promote that organization of TS and workshops in academic institutions that will be easily accessible and to minimize cost. An effort will also be made to organize the Action's Events on the side of other major events in order to leverage these events for synergies and dissemination and to minimize travel expenses when possible. Recognized scientific leaders from non-COST countries will be invited to deliver keynotes in these Action events. The selection of speakers and topics will be coordinated by the MC and the WGs leaders. The TC will also be responsible for managing the organization and scheduling of STSMs and the mobility of ESRs. The emphasis will be on maximizing the benefit to the ESRs and the achievement of the Action objectives. The ESRs will present their research and training outcomes arising from the training activities during the last conference, and share their experiences during the Action with suggestions for improvements in future COST Actions. Similarly, there will be emphasis in including stakeholders from countries of the inclusiveness target group in-line with the COST framework mission and policies. This can be achieved by appointing individuals in the TC that will oversee the inclusion of ESRs and ITC specifically during the duration of this Action. Standardized application and reporting forms for STSMs will be developed by the Action, designed to promote uniformity and to facilitate the task of the TC in monitoring and evaluating the success of individual STSMs. The TC will meet twice a year (at least one meeting will be face-to-face), although more frequent meetings will be held if deemed necessary.

The WG leaders will be nominated at the first MC meeting. Each WG leader will be responsible for the coordination of activities within their WG so as to meet the objectives defined in the scientific program; take steps (e.g. nominate STSMs) to promote synergies and nurture joint research (funded by the institutions of the WG members), giving priority to collaborations between ESRs and senior members; plan the scientific meetings and workshops appropriate for their WG; oversee the co-authoring of scientific publications, ensuring the visibility of ESRs; identify promptly potential problems in the execution of the scientific program of the WG and take appropriate measures and/or report to the MC for WG concerns requiring immediate attention. The WG leaders will also be responsible for the timely reporting of the WG progress (scientific achievements and output, dissemination activities, major problems and solutions implemented) to the Action MC, Chair and Vice Chair, participate in MC and WG meeting, and coordinate submission of outreach material on the website of the Action. The WGs will meet twice a year and via electronic communication (e.g. skype).

A Dissemination Committee (DC) will be responsible for promoting the communication of scientific information, dissemination reports generated by the Action through scientific and popular media to the research community, to policy-makers and to the public. The DC will also be responsible for the organisation of two conferences: at the end of the first year and at the end of this Action. The DC, with the support from the WG leader, will showcase success stories related to ESRs and will oversee the correct handling of possible intellectual rights issues when they arise, as specified in the COST Implementation Rules. The DC will meet twice a year (at least one meeting will be face-to-face) and there will be additional communication electronically if necessary.

A Website Committee (WC) will manage the development and maintenance of the Action website. The website will serve as a major dissemination venue highlighting the activities and achievements of the Action and it will be used as an international resource for the study of nursing care rationing connecting a variety of stakeholders including academics, researchers, policy makers, registry

bodies, trade unions and non-government organisations in the field. The WC will ensure that the website remains updated on a regular basis throughout the Action (once every month). The website will also feature a secure section that will serve as a collaboration portal for Action participants. The WC will be also be responsible for setting up of a depository database of scientific literature, measures, strategies and interventions related to rationing of nursing care that will be maintained and updated by the various WGs throughout the Action. The WC will meet twice a year (at least one meeting will be face-to-face) and there will be additional communication electronically if necessary.

The Coordination Committee (CC) will be responsible for communicating the findings amongst the WGs, facilitate discussion and interlinks between WGs, identify overlapping areas of shared interest, and issues of a WG that be used to built upon by other WGs. In addition, the CC will collate and report shared issues from all WGs that can be forwarded to the WC and DC (e.g. content of the edited book); the CC will also be responsible, in collaboration with the DC, for the production and distribution of eLetters reporting news and progress to all stakeholders twice a year. The CC will meet twice a year (at least one meeting will be face-to-face) and there will be additional communication electronically if necessary

The meetings of the various groups (TC, WGs, DC, WC, CC) will take place back-to-back with the MC meetings where feasible to save resources.

3.3. Network as a whole

This Action aims to bring together for the first time a range of stakeholders including academics, policy makers, clinical staff, patients and unions to form a critical mass of investigators for the study of rationing of nursing care. Currently there are 36 participants from 19 countries of which 15 are COST countries. The Action will also seek to enlarge the network to include additional participants and countries particularly from the inclusiveness target group and countries that have yet to develop research expertise on the topic. The current size of the network, and its expected subsequent increase, provides the necessary infrastructure and human resource to ensure the set tasks and activities are implemented as aimed. In terms of the expertise of the network, the majority of the participants of the network, also involved in the preparation of the Action, comprise some of the core group of researchers that have active and ongoing interest in investigating rationing of nursing care with established record of peer-reviewed work. The network also comprises of experienced partners with considerable experience in providing training to ESRs, delivering workshops, and participating in other European and international consortiums. The participating countries cover a large geographical network of North, South, East and West Europe as well as non-European area. Additional countries will be invited to join to increase inclusivity. Researchers and key stakeholders will be invited to join the network from less research-intensive countries related to the proposed area across Europe. They will be encouraged to set up, lead or join WGs, trainings and workshops. The breath of coverage of the countries will ensure contribution to the range of expertise in rationing of nursing care, to the advances made in research and knowledge gained, and identifying the gaps to be addressed as well as provide the opportunity for research communities with unequal access to knowledge infrastructure, funding, networking and resources to benefit from joining such network. The network is aware there is an uneven distribution of resources despite the phenomenon of rationing of nursing care appearing to be widespread so countries from the inclusiveness target group are included, currently approximately at 50% of our network, and International Partner Countries (IPC; Australia, Canada, USA, New Zealand) to ensure that advances in this area will continue to have global impact. There are mutual benefits deriving from the participation of IPC: access to bigger population, discussing advances in particular methods, engaging with particular stakeholders not involved at European level (e.g. unions) and sharing of expertise and knowledge. This will also provide opportunity to develop contacts and further their work expanding to Europe.



GANTT DIAGRAM

Year	Year 1				Year 2				Year 3				Year 4			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Milestones (M)																
1 MC meeting and coordination of all WGs	M															
Website		M														
Depository database				M												
MC/TC/DC/WC/CC meetings		M		M		M		M		M		M		M		M
WG 1-WG4: meetings and minutes		M		M		M		M		M		M		M		M
WG1-WG4: Short progress reports		M		M		M		M		M		M		M		M
eLetters		M		M		M		M		M		M		M		M
Conferences				M												M
WG1: M2 - 4 International Workshops		M	M			M	M									
WG1: M3 and M4 - 5 International Workshops				M		M	M	M		M						
WG1: M5 - 2 International Workshops								M			M					
WG1: M6 - 2 Training Schools								M	M							
WG1: M7, M8 and M11 - 3 papers																M
WG1: M9 and M10 - 2 papers															M	
WG2: M2 - 2 International Workshops		M				M										
WG2: M3 - 4 International Workshops					M		M		M		M					
WG2: M4 - 2 Training Schools												M		M		
WG2: M5 - 1 paper																M
WG3: M2 - 3 International Workshops					M			M		M						
WG3: M3 - 2 Training Schools					M						M					
WG3: M4 - 1 review paper								M								
WG3: M5 - Consensus statement														M		
WG4: M2 and M3 - 4 International Workshops		M	M				M	M								
WG4: M4 - 4 STSMs				M				M								
WG4: M5 - 10 local workshops					M	M	M	M	M	M	M	M				
WG4: M6 - 2 Training Schools									M					M		
WG4: M7 - 1 review paper; 2 training manuals; 1 policy paper																M
Edited book																M



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