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Year 1 Deliverable Report D2.1

WP2: Scientific Meetings for Interchange, Dissemination, Roadmap & Policy

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WP2: Scientific Meetings for Interchange, Dissemination, Roadmap & Policy

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WP2: Scientific Meetings for Interchange, Dissemination, Roadmap & Policy

Summary of Progress on WP2

The budgets for all the WP2 work packages are relatively small and present a considerable challenge to the work package leaders. In most cases the only way to achieve our objects is to work with others to gain leverage on our funds by sharing costs. The work package leaders have been very creative in this, in many cases finding excellent partners enabling them to co-organise events otherwise beyond the scope of their budgets (shown below).

	Budget	Name	Leader	Months
WP2 Scientific Meetings for Interchange, Dissemination, Roadmap & Policy			Chavalarias	
WP2.1 Organising Scientific Meetings around Europe & New Member States	40,000	UWAR	Nowak	(2)
WP2.2 Organising Scientific Meetings in Turkey and Associate Member States	10,000	BU	Bingöl	(1)
WP2.3 Organising Scientific Meetings with India (India-China-Europe Triangle)	20,000	ISI	Rasetti	(1)
WP2.4 A Organising Scientific Meetings with China (India-China-Europe Triangle)	20,000	UH	Zhang J	(--)
WP2.4 B Organising Scientific Meetings with China (India-China-Europe Triangle)	20,000	UNI-F	Zhang Y	(1)
WP2.5 Organising Scientific Meetings with Africa (UNESCO Chair)	20,000	CNRS	Bourgine	(2)
WP2.6 Organising Scientific Meetings with the Para Limes Institute	15,000	IPL	Vasbinder	(1)
WP2.7 Coordinating scientific meetings to feed into roadmap and policy	6,000	CNRS	Chavalarias	(1)

Given the financial constraints we feel that WP2 has been very successful this year.

It organised a major event at the FET Conference *Science Beyond Fiction* in Prague (WP2.1), it has planned a school to take place in Turkey in August-September 2010 (WP2.2), it may fund Indian or Chinese scholars to attend the BIG-STEP meeting in Brussels in April 2010 (WP2.3), it has already held a meeting in China (WP2.4), it has planned research and education meetings on Africa (WP2.5), it plans a meeting at the Para Limes Institute, and it is a co-organiser of the important BIG-STEP science-policy meeting.

Many events are currently be organised and we expect 2010-2011 to be equally successful.

1. Objectives of WP2

Objective 2 of ASSYST is stated in Annex-1 (page 6) as:

Objective 2: To promote and support CS scientific interchange in Europe and worldwide

- Organising scientific meetings in Europe, the new member states and candidate states in order to facilitate the exchange of research ideas for both senior and young researchers of the European CS & COSI-ICT research community.
- Organising scientific interaction with India and China, building on the India-China-Europe Triangle structure formed by previous projects.
- Organising scientific interaction with North and South America, and Japan building on existing networks and making new scientific networks.
- Setting up a UNESCO Chair to create a European-African network of research in CS and COSI-ICT.
- To use the scientific meetings of ASSYST as a means of collecting information on the state of the art of CS and COSI-ICT in Europe and throughout the world to feed into a roadmap and to support Objective 1.

Objective 2 involves the coordination of CS and COSI-ICT research in Europe, interfacing that research to the rest of the world, and thereby obtaining understanding of different national policies for developing and funding CS research. Scientifically, the impact of meetings in Europe will be enabling the rapid exchange, development and dissemination of research ideas, especially for the COSI-ICT IPs. The international meetings in India, China, America, and Japan will have a high impact on research policy in Europe, setting a global context for European policy on CS and COSI-ICT research support and development. The proposed UNESCO chair can have a very high impact on the application of CS and COSI-ICT since Africa will play an increasingly important role in global politics in the context climate change, resources (minerals, water, food, etc), world peace and social justice. Objective 2 contributes to the impact of Objective 1 by providing in-depth and in-breadth information on the state of the art of the CS and COSI-ICT science in Europe and worldwide.

This objective is articulated in more detail on page 22 of Annex-1 as:

Objectives

- 2.1 To hold scientific meetings around Europe to connect and coordinate the CS community
- 2.2 To strengthen connections between the European CS Community and CS Scientists in the world
- 2.3 To coordinate collaboration between the CSS and ESSA (European Social Simulation Society)
- 2.4 To establish scientific and policymaker contacts in CS and COSI-ICT
- 2.5 To find the CS & COSI-ICT research strategy of governments in Europe and around the world.
- 2.6 To align CS & COSI-ICT agendas and policy where appropriate for Europe and member states.
- 2.7 To capture state-of-the art information for the roadmap and policy documents.

Description of work

WP2 involves the organisation of scientific events. All the sub-workpackages will proceed as follows:

(1) The WP2 leaders will propose outline events to the ASSYST Management Committee including scientific topic, location, and draft programme giving the invited and other speakers, budget, and expected participants.

- (2) On approval of the outline the WP leader will organise and deliver the events without further reference to the Management Committee.
- (3) A written scientific report of all events will be presented to the Management Committee within one month of the event for publication on the ASSYST web site.
- (4) Unless agreed beforehand by the Management Committee, participation in ASSYST events means that presentations will be published on the ASSYST web site. The WP leader will collect any PowerPoint presentations and other useful materials for dissemination on the ASSYST Web Site.
- (5) WP leaders will gain leverage on the funds by seeking matching local funds or support, working with other groups and, possibly, co-funding events.

ASSYST has a wide scientific mandate to support the whole CS community. Also, in proposing scientific events, work package leaders and Management Committee will be aware of the impact required in the COSI-ICT call:

“This research should contribute to a new multidisciplinary understanding of the ways in which ICT changes, moulds and becomes part of the systems to which it is applied, and lead to better targeted deployment of socially intelligent ICT systems. Breakthroughs will lead to deeper understanding and the ability to predict and design for instance new generations of autonomous information- or high-bandwidth communication systems by exploiting models of self organisation, adaptability and social behaviour. Applications include e.g., massive service economies and other technology-dependent experimental economic models, ICT mediated communities, P2P systems, emergency management and disaster relief systems. Projects should indicate how efficient data gathering, simulation, prediction and control techniques can lead to more human-centric systems, can harness collective intelligence or behaviour, can support businesses and policy makers with best practices that have a clear and definable societal and economic added value or can contribute to solving long-term challenges such as sustainable growth, energy efficiency, or social inclusion.”

The Management Committee will provide a balance of events, with about half addressing the COSI-ICT impact specification. The Management Committee will be expected to be flexible in this seeking a portfolio of events that covers a wide variety of CS scientific issues in a variety of ways. In general the scientific quality of proposals will be paramount.

In common with other work packages, all the meetings in WP2 must be approved by the Management Committee. This involves completing an ASSYST Management Committee Approval Form (MCAF) and submitting it to the Management Committee for approval (see Appendix A). This approval includes showing how the meeting contributes to the CS and COSI-ICT objectives of ASSYST.

2. WP2 Deliverables and Milestones for the period

The Deliverable for WP2 is D2.1 – this report ●

Milestones

M2.1 Meetings held Year 1 WP2 Month 12 ●

3. WP2 progress and achievements during the period

WP2.1 Scientific Meetings in Europe & New Member States

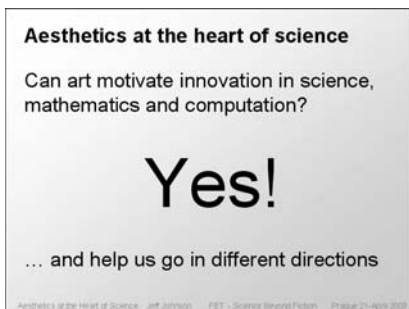
Leader: Andrzej Nowak (ASEB)

The funds are to be used to seed 3+ scientific meetings around Europe for about 30 people. The meetings should be held in places that have had few or no CS meetings in the past, and should involve as many local people as possible.

The purpose of the WP is to facilitate scientific interchange in Europe, bring more people into the CSS, and determine the state of the art in CS and COSI-ICT for the roadmap.



(a) the programme for the event



(b) the theme of the event

Figure 1

In April 2009 ASSYST organised a meeting *Aesthetics at the Heart of Science* at the FET conference *Science Beyond Fiction* in Prague. The theme of the event was the question of the place of art in science, and whether art can make a contribution to science in any way .

In particular the science of complex systems addresses questions that cannot be answered by the conventional natural, social or engineering sciences, and it will be necessary to find new ways of thinking. Therefore we ask the serious question *can art be part of science?*

To emphasise the question we conducted the event as a piece of theatre, a ‘Scientific Triptych Performance animated by Paul Bourguine and Jeffrey Johnson’. The event was organised as three acts: Act I: Cyberspace, Act II: The Restaurant, and Act III: Room Tycho. In the first act participants were asked to create a presentation addressing our questions, and to send it to us in Cyberspace. The second act took place in the conference restaurant where the participants debated the question - and much else! The third act took place in the conference room Tycho with each participant giving a presentation lasting about twenty minutes.

The speakers at the meeting included Gregory Chaitin, Eve Mitleton-Kelly, Rolf Reber, Nadine Peyri ras, Louis Bec, Ren  Doursat, Albert-L szl  Barab si, Jeff Johnson and Paul Bourguine.

About fifty people attended the meeting and the audience was invited to join in the performance, which many did. The response to the event from both the audience and the participants was very positive – here was an example in which art stimulated a very lively scientific debate.



Figure 2. The presentations are recorded on the ASSYST web site
 (<http://assystcomplexity.eu/video.jsp?collection=FET2009>)

The presentations given at the meeting were captured on video and placed into the video archive of the ASSYST web site. The presentation showed science as art and art as science. For example Peyri ras

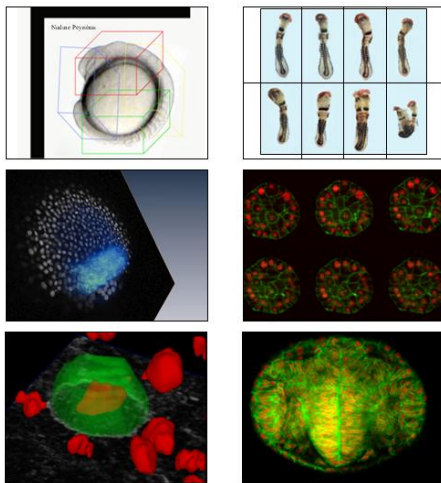


Figure 3. Nadine Peyri ras: morphogenesis

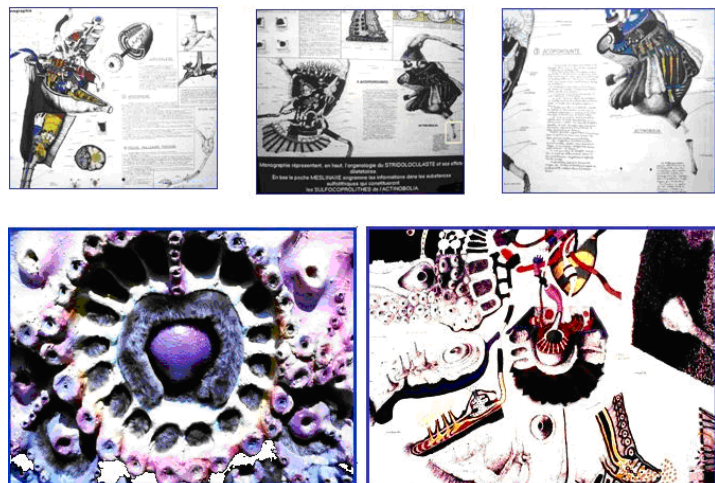


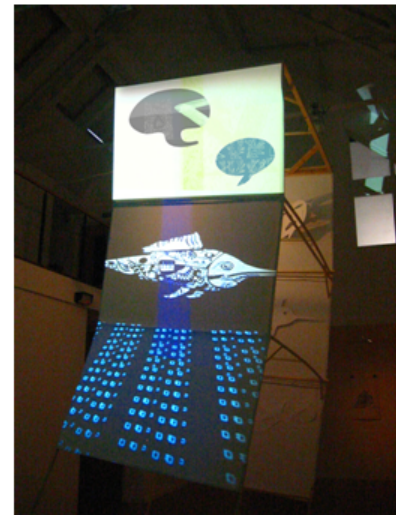
Figure 4. Louis Bec: Varenna Stridorotrophe okeini



Figure 5. Louis Bec



(a) temporal development of objects



(b) Photograph of the video installation

Figure 9. The video installation *Complex Embrace* by Damian Gascoigne
The Stanley Picker Gallery, Kingston, Dec 2005.

Figure 6. ‘Complex Embrace’ by Damian Gascoigne

showed dramatic and beautiful animations of the *in-vivo* observation of the development of the zebra fish embryo, while Louis Bec (Figure 5) introduced himself as a new kind of scientist “La tache du zoosystemicien est de faire apparaître une metazologie en modelisant des zoosystemes” showed amazing images of the artificial life forms he has created. Doursat developed the theme of design and metadesign for creating artificial systems, again illustrated by stunning images.



Figure 7

The theme of design is a recurrent theme in the science of complex systems. Design spans a spectrum from the fine arts to highly technical engineering, with architecture somewhere in between. For Herbert Simon Design concerns the ‘Sciences of the Artificial’ where the object of study is systems as they *ought* to be.

During 2009 the book *Embracing Complexity in Design* (Figure 7) was published, documenting four years of workshops and meetings within the complexity and design communities (Figure 6). In this book Johnson makes the claim that design is a necessary part of the methodology of complex systems science, since most socio-technical systems are artificial. being man-made.

Aesthetics at the Heart of Science was a very interesting and simulating meeting and it is not possible to summarise it all here. Let us finish with a comment by Greg Chaitin talking about mathematics, where he said the greatest complement a mathematician can pay another is not to say that the work is clever or complex or even original, but that it is *beautiful!*

WP2.2 Scientific Meetings in Turkey & Associate Member States

Leaders: Haluk Bingöl (BU),

The funds are to be used to seed 2+ scientific meetings in Associate Member States of the European Union. The meetings should involve at least 30 scientists. One of these meetings will be held in Turkey and should involve as many local people as possible, including scientists, people from the public and private sectors. One of the meetings

may be held in a European city with support for scientists from associate member states to participate and mix with members of the international CS community.

The purpose of the WP is to facilitate scientific interchange in Europe, integrate associate member states, stimulate more meetings, bring more people into the CSS, and determine the state of the art in CS and COSI-ICT for the roadmap.

This work package is progressing well. It has a small budget of €10K to organise two meetings. Leverage has been gained on this by working with Peter Richmond of the COST MPNS Action MP0801 Physics of Competition and Conflicts which end in June 2012. Together we will organise a school at the Institute of Theoretical and Applied Physics at Turunç in Turkey, organised by Prof Haluk Bingol for ASSYST.

The screenshot shows the website for the Institute of Theoretical and Applied Physics in Turunç, Marmaris, Turkey. The page lists approved activities for 2010. A blue oval highlights the following activity:

IARS 2010 Program	Dates	Place	Deadline
• Physics of Fundamental Effects in Condensed Matter: Theory & Experiment	July/14-27	ITAP	TBA
• Frontier Topics in Mesoscopic Quantum Mechanics	July/29-August/8	ITAP	TBA
• Chinese Physics Summer School 2010 - Regional Climate Modelling	August/09-20	ITAP	TBA
• International Summer School on Complex Systems: Structure and Dynamics	August/22-Sept/04	ITAP	TBA
• Frontier Topics in Bose-Einstein Condensation in Atoms & Semiconductors	11-19/September	ITAP	TBA

Figure 8: A scientific meeting to be held in Turkey August-September 2010

WP2.3 Organising Scientific Meetings with India (India-China Triangle)

Leader: Mario Rasetti (ISI)

Two meetings will be held, one at ISI and the other in India to continue the India-China-Europe Triangle collaboration initiated by the EXYSTENCE, ONCE-CS and GIACS projects.

The purpose of the WP is to facilitate scientific interchange between Europe and India, bring more people into the CSS, disseminate European research in India, and determine the state of the art of CS and COSI-ICT in India for the roadmap.

Working with Complexity-Net and the GSD coordination action (Global Systems Dynamics) ASSYST is organising a workshop at the Académie Royale in Brussels, BIG-STEP: Business, Industry and Government – Science and new Technologies for Enhancing Policy (see WP2.7). It is possible that funding may come from this work package to support Chinese or Indian scholars to attend this meeting.

WP2.4 Scientific Meetings with China (India-China Triangle)

Leaders: Jianwei Zhang (UH) & Zhang Yi-Cheng (UNI-F)

2+ meetings will be held in Europe and China to continue the India-China-Europe Triangle collaboration initiated by the EXYSTENCE, ONCE-CS and GIACS projects.

The purpose of the WP is to facilitate scientific interchange between Europe and China, bring more people into the CSS, disseminate European research in China, and determine the state of the art of CS and COSI-ICT in China for the roadmap.

The leaders of this workpackage were involved in the organisation of the meeting:

Workshop on Route Map of Interdisciplinary Physics and Complexity Sciences Sanya, Hainan, China, Jan. 4-10, 2010

According to the suggestions from the participants and organizers of the [Third Europe-China Summer School on Complexity Sciences](#), for the purpose of deeply discussing the state-of-the-art progress of interdisciplinary physics and complexity sciences, and in particular working out the route-map for future studies in China that is similar to the EU ASSYST project, we will hold a small-scale workshop involving the representative young Chinese scientists in Jan, 2010, Sanya, China.

This workshop will focus on the discussions of (i) the current progress of relevant studies; (ii) how to make effective and efficient collaborations among research groups in the near future, including the exchanging of faculty members and students, the sharing of data, and so on; (iii) the organization details about relevant scientific activities in 2010, especially for some co-organized conferences and workshops in the near future; (iv) the large-scale cooperation on National scientific projects; (v) the future cooperation with the EU project, like ASSYST Project.

Co-Chairs:

Bing-Hong Wang (University of Science and Technology of China, P. R. China)
Yi-Cheng Zhang (University of Fribourg, Switzerland)

Invited Participants:

Bin Chen (University of Shanghai for Science and Technology, P. R. China)
Zeng-Ru Di (Beijing Normal University, P. R. China)
Da-Ren He (Yangzhou University, P. R. China)
Pak-Ming Hui (Chinese University of Hong Kong, Hong Kong)
Fei Ren (East China University of Science and Technology, P. R. China)
Lei-Han Tang (Hong Kong Baptist University, Hong Kong)
Michael Wong (Hong Kong University of Science and Technology, Hong Kong)
Ming-Sheng Shang (University of Electronic Science and Technology of China, P. R. China)
Bo Zheng (Zhejiang University, P. R. China)
Changsong Zhou (Hong Kong Baptist University, Hong Kong)
Hai-Jun Zhou (Chinese Academy of Sciences, P. R. China)
Shui-Geng Zhou (Fudan University, P. R. China)
Tao Zhou (University of Fribourg, Switzerland)
Wei-Xing Zhou (East China University of Science and Technology, P. R. China)

Venue: participants will lodged in three different hotels, the meeting will take place at Crowne Plaza Sanya Hotel. Participants are encouraged to fund their own travels, except commons facilities which are covered by the organizers. Working languages will be Chinese and English.

Although this meeting was not funded by ASSYST this year, it is planned to hold another meeting which will connect European and Chinese scientists in August 2010.

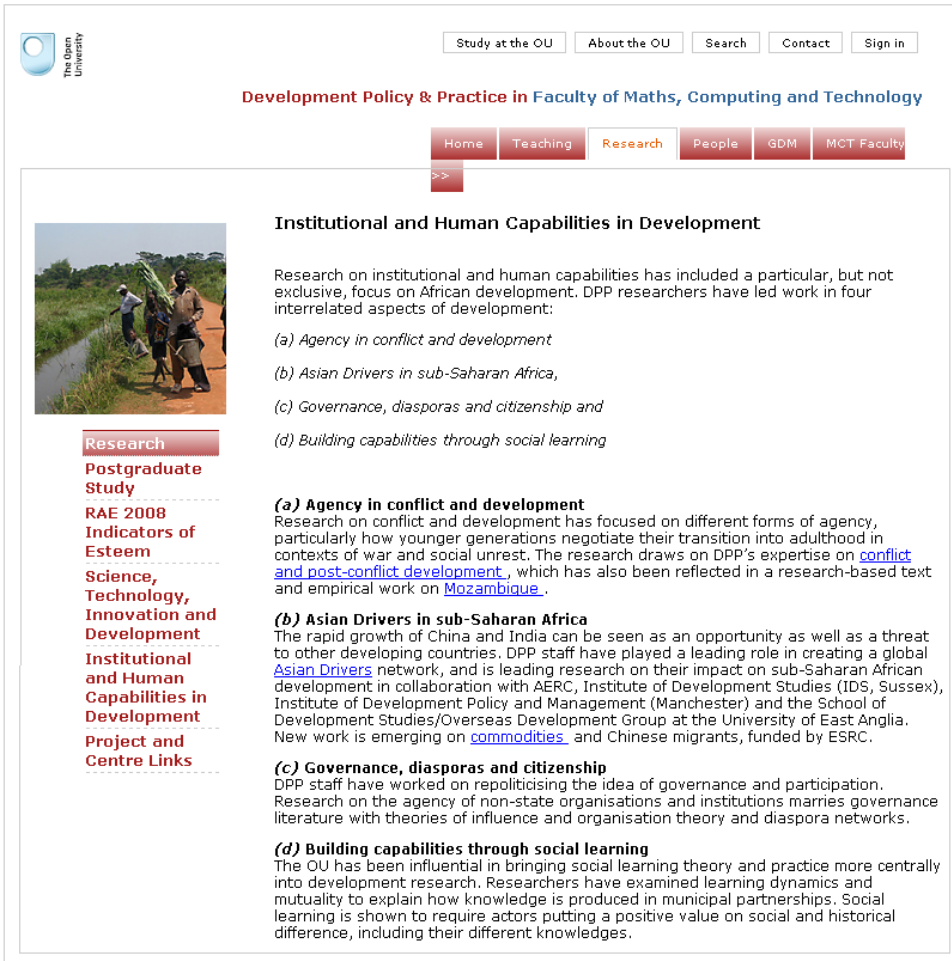
WP2.5 Organising Scientific Meetings with Africa (UNESCO Chair)

Leader: Paul Bourguine (CNRS)

This workpackage involves the creation of a ‘UNESCO Chair’ based in the *Institut des Systèmes Complex de Paris et Ile de France*. The funds are to be used for making connections with African scientists and scientific administrators seeking ways to increase knowledge of complex systems across the sub-Saharan Africa. The WP leader will seek to contact as many African scientists as possible, and to find new ways for large numbers of African scientists and students to benefit from being connected to the European CS community. This initiative is supported by the Complex Systems Society which will set up a new committee for CS in Africa chaired by Paul Bourguine.

The purpose of the WP is to facilitate scientific interchange between Europe and Africa, bring more people into the CSS, disseminate European research in Africa, and determine the state of the art of CS and COSI-ICT in Africa for the roadmap.

The Open University has an internationally renowned *Development Policy and Practice* research group (Figure 9) that has depth and breadth of knowledge of Africa. Two international workshops are planned with them. The first *Development, Policy and Complex Systems* will be held at the Open University in June 2010 and the second will be held at ISC-PIF in Paris. A representative from UNESCO will be invited to this second meeting where the subject will be *Complex Systems Education for Policy*.



The screenshot shows the website for the Development Policy & Practice (DPP) research group at the Open University. The page features a navigation menu with options like 'Home', 'Teaching', 'Research', 'People', 'GDM', and 'MCT Faculty'. The main content area is titled 'Institutional and Human Capabilities in Development' and includes a photograph of people in a rural setting. Below the photo is a list of research topics, including 'Agency in conflict and development', 'Asian Drivers in sub-Saharan Africa', 'Governance, diasporas and citizenship', and 'Building capabilities through social learning'. Each topic is followed by a brief description of the research focus.

Institutional and Human Capabilities in Development

Research on institutional and human capabilities has included a particular, but not exclusive, focus on African development. DPP researchers have led work in four interrelated aspects of development:

- (a) *Agency in conflict and development*
- (b) *Asian Drivers in sub-Saharan Africa*,
- (c) *Governance, diasporas and citizenship and*
- (d) *Building capabilities through social learning*

(a) Agency in conflict and development
Research on conflict and development has focused on different forms of agency, particularly how younger generations negotiate their transition into adulthood in contexts of war and social unrest. The research draws on DPP's expertise on [conflict and post-conflict development](#), which has also been reflected in a research-based text and empirical work on [Mozambique](#).

(b) Asian Drivers in sub-Saharan Africa
The rapid growth of China and India can be seen as an opportunity as well as a threat to other developing countries. DPP staff have played a leading role in creating a global [Asian Drivers](#) network, and is leading research on their impact on sub-Saharan African development in collaboration with AERC, Institute of Development Studies (IDS, Sussex), Institute of Development Policy and Management (Manchester) and the School of Development Studies/Overseas Development Group at the University of East Anglia. New work is emerging on [commodities](#) and Chinese migrants, funded by ESRC.

(c) Governance, diasporas and citizenship
DPP staff have worked on repoliticising the idea of governance and participation. Research on the agency of non-state organisations and institutions marries governance literature with theories of influence and organisation theory and diaspora networks.

(d) Building capabilities through social learning
The OU has been influential in bringing social learning theory and practice more centrally into development research. Researchers have examined learning dynamics and mutuality to explain how knowledge is produced in municipal partnerships. Social learning is shown to require actors putting a positive value on social and historical difference, including their different knowledges.

Figure 9: A workshop on *Development, Policy and Complex Systems* will be held at the Open University

WP2.6 Organising Scientific Meetings with the Para Limes Institute

Leader: Jan Vasbinder (IPL)

The Para Limes Institute is a new European centre for CS science. “The mission of the Institute Para Limes is to be a place where a community of scholars can assemble and exchange views in an open, questioning environment freed from the boundaries of disciplines, the formality of rank, the burden of administration and the pressure of short-term deliverables. ... It will be a place where people are encouraged to question the bedrock assumptions with which they work, and dare to dream of bridging the gaps in our understanding. ... At the Institute, bold new ideas will be listened to and challenged from many different angles, honed by criticism, enriched by cross-disciplinary inputs and nurtured by encouragement.” The four major goals of IPL are defined as: 1. To be a European based institute that acts as a free port for developing new multidisciplinary methods based on intense collaboration between scientific disciplines, creating a strong stimulating effect on European and global research. 2. To be a place where new sciences can freely emerge, not hampered by dividing lines between conventional scientific realms or preconceived limits as to what is possible. 3. To provide strong attractive power to the best minds in the world because of the combinatorial inspiration and the relevance that radiates from the activities of the institute. 4. To address relevant scientific questions dealing with fundamental issues that must be solved for the future.

ASSYST intends to make European Scientists aware of this new institute by supporting scientific meetings with the institute. This will involve co-funding an event enabling young scientists to participate, as approved by the ASSYST Management Committee.

The purpose of the WP is to hold a European major workshop/conference on CS and COSI-ICT and to enable the new Para Limes Institute to play an increasing role in CS and COSI-ICT research and dissemination, and to feed information into the roadmap.

We intend to hold the first meeting at Para Limes in 2011.

WP2.7 Coordinating scientific meetings for the roadmap and policy

Leader: David Chavalarias (CNRS)

It is essential that the output all the scientific meetings held by ASSYST feeds into the roadmap and related policy documents according to the objectives and international policy of ASSYST. This small workpackage complements WP1.2 and is intended to ensure the necessary information flows from WP2 to WP1.

As explained in detail in the report for WP1, we are working with GSD coordination action and Complexity-Net to organise the science-policy meeting ‘BIG-STEP: Business, Industry and Government – Science and new Technologies for Enhancing Policy’ at the Académie Royale in Brussels April 14th - 15th 2010. The purpose of the meeting is:

1. Understand the needs of the policy makers in business and government
2. Allow an exchange of ideas about applying systems ideas of complexity to decision-making methods and policy communication consultation
3. See how ICT can be used to enhance uptake of scientific advice and highlight new technologies that would help further
4. Evaluate how society will respond to new initiatives

This workshop will make a big contribution to the roadmap and our understanding of the relationship between complex systems science and policy. The Agenda for that meeting is attached as Appendix A.

4. Summary

We feel that WP2 has been very successful this year. It organised a major event at the FET Conference *Science Beyond Fiction* in Prague (WP2.1), it has planned a school to take place in Turkey in August-September 2010 (WP2.2), it may fund Indian or Chinese scholars to attend the BIG STEP meeting in Brussels in April 2010 (WP2.3), it has already held a meeting in China (WP2.4), it has planned research and education meetings on Africa (WP2.5), it plans a meeting at the Para Limes Institute, and it is a co-organiser of the important BIG STEP science-policy meeting.

Appendix – A:



Aesthetics at the Heart of Science

A Scientific Triptych Performance animated by Paul Bourguine and Jeffrey Johnson

Act I: Cyberspace

Act II: The Restaurant

Act III: Room Tycho

To be performed during
Science beyond Fiction

The European Future Technologies Conference

ACT I Cyberspace

Cast Anyone
Location Anywhere

Direction: Please make five Powerpoint slides addressing the following questions

- What are the aesthetic tools in science? What is their relationship to logical tools?
- How to change education at all levels combining the logical and the aesthetic?
- Metadesign: using the beauty of natural systems for designing artificial systems?
- Should science embrace the methods of the artists? Is art part of the new science?
- Can art motivate innovation in science, mathematics and computation?

ACT II The Restaurant

Cast Everyone is invited to dinner,
Time: 7:30 pm, Wednesday 22nd April 2009
Location Restaurant Gourmet, Clarion Hotel, Prague

Direction:

Scene 1 Drinks: Aperitif Presentation animators welcome guests & explain the project
Scene 2 Entrée Starter Presentation
Scene 3 Plat Presentations
Scene 4 Dessert: Sweet Presentation
Scene 5: Café Discussion and plans for ACT III

ACT III Room Tycho

Cast Everyone from the Restaurant, delegates
Time 11:00 a.m. – 12:00 a.m, Thursday 23rd April 2009.
Location Room Tycho, Clarion Hotel, Prague

Direction

Scene 1 Animators explain the project and the choreography
Scene 2 Performances
Scene 3 Meta-performances
Scene 4 Narrator closes the curtains

The End



Appendix – B: Draft Agenda for the BIG-STEP meeting

BIG-STEP

Business, Industry and Government – Science and new Technologies for Enhancing Policy

Académie Royale, Brussels

April 14th - 15th 2010

Motivation

Policy makers, whether in government or business, are confronted with local decisions that should take into account a multitude of highly interdependent processes in physical, biological, technical, social, economic and political systems. The implications of any decisions are increasingly difficult to evaluate and are often global in scale. There is an urgent need to augment the tools available for developing and assessing various policy options and to provide new techniques to help improve decision-making processes. It is therefore timely to bring policy makers and scientific advisors together to understand how new technologies and systems approaches can be integrated into decision making.

Objectives

The aim of the meeting is to bring leaders of government, industry and commercial business together with scientists to:

- 1. Understand the needs of the policy makers in business and government**
- 2. Allow an exchange of ideas about applying systems ideas of complexity to decision-making methods and policy communication consultation**
- 3. See how ICT can be used to enhance uptake of scientific advice and highlight new technologies that would help further**
- 4. Evaluate how society will respond to new initiatives**

Organised by GSD, ASSYST and Complexity NET

GSD: Global System Dynamics and Policies: simulation and visualisation technologies, a FP7 EC FET Coordination Action project

ASSYST: Action for the Science of Complex Systems and Socially intelligent ICT, an EC FET COSI-ICT project

Complexity NET: s a group of European science and technology funding agencies, research councils and ministries all working together to create an environment that best enables the coordination of strategically planned national activities in Complexity Science and Complex Systems

DRAFT AGENDA

Wednesday 14th April

Energy and the Environment

The need for a sustainable future is becoming ever clearer. As non-renewable resources continue to be depleted, the issue of energy security will become a very real threat. Coupled with the increasing risks of climate change, policy makers worldwide are under immense pressure to find solutions to global complex problems. Scientists have a responsibility to provide these policy makers with credible advice.

09.30-09.45: *Introduction from Host* – **Lord Julian Hunt**

09.45-10.15: Keynote address from policy maker – **Jacqueie McGlade, Executive Director of EEA**

10.15-10.45: Keynote address from Scientist – Lord Anthony Giddens (tbc)

10.45-11.15: Keynote address from industry leader – Jan Kempers, Sustainable Development Manager, Heineken (tbc)

11.15-11.30: *Coffee*

11.30-13.00: *Panel: The energy and environment policy process (4-6 people)*

An opportunity to discuss energy and environment policy processes and how a systems based approach can be introduced.

Chaired by Lord Julian Hunt

Speakers from morning session

Zoran Stancic, Deputy Director of EC (tbc)

Leonidas Rokanas, Greek Ambassador to Brussels

13.00-14.00: *Lunch*

14.00-15.30: *Case Study – ‘The future of energy’*

This session will examine both success stories and failures of the application of systems to the energy and environment policy process.

Chair: Lord Paul Drayson, UK Minister of Science (tbc)

Dr, Jean-Yves Caenil, Project Manager of EDF Sustainable Development Division (tbc)

Prof. Tadj Oreszczyn, UCL Energy Institute (tbc)

15.30-16.00: *Coffee*

16.00-17.10: *Discussion: Commerce, big business and government (4-6 people)*

A discussion on the differences and similarities in the requirements and needs of policy makers in a variety of sectors and how these might be achieved through a systems based approach.

Chair: **Michel Morvan, Scientific Director, Veolia**

Prof. Andrzej Nowak, University of Poland

Prof. Kristian Lindgren, Chalmers University, Gothenberg

Ricardo Baesa-Yatez, Head of Yahoo’s Research Division for Europe and S. America

Detlof von Winterfeldt, Director of IIASA (tbc)

Prof. Anton Obholzer, Organisational Consultant and Psychoanalyst & Former Director of Tavistock Centre, London (tbc)

17.10-17.30: *Summary from host* – **Lord Julian Hunt**

17.30: *Close*

Thursday 15th April

Risk and the Economy

The recent financial crisis is compelling evidence of the need to find new ways to ensure resilient, versatile and sustainable economies based on science and new technologies in close collaboration with business, governments and scientists.

09.30-10.00: *Introduction to second day from Host* – **Carlo Jaeger**

10.00-10.30: Key address from scientist – **Prof. Dirk Helbing, ETH Zurich**

10.30-11.00: Key address from policy maker – Jerzy Buzek, President of European Parliament (tbc)

11.00-11.30: Key address from business leader – Peter Hoeppe, Munich Reinsurance (tbc)

11.30-12.00: *Coffee*

12.00-13.00: Panel: **The economic policy process (4-6 people)**

An opportunity to discuss economic policy processes and how a systems based approach can be introduced.

Chair: Prof. Carlo Jaeger

Including all morning speakers

Dr. Dougal Goodman, Chief Executive of UK Science and Technology Board (tbc)

13.00-14.00: *Lunch*

14.00-14.45: Panel: **Assessing Risk**

Chair: **Prof. Diana Mangalagu**

Prof. Bert deVries, Utrecht University

Prof. Klaus Hasselmann, Max Planck Institute

14.45-15.00: *Coffee*

15.00-15.40: Panel: **Interpreting the impact of potential risks from the economy**

Chair: **Armin Haas, PIK**

Prof. Antonio Ruiz de Elvira

Dr. Aris Karytinis (General Director of the Real Estate Department of the National Bank of Greece)

Prof. Henri Berestycki, CRNS, Paris

15.25-15.40: Risk and the Economy summary – **Prof. Carlo Jaeger**

15.40-16.00: Conference summary speaker – **Dr. Ralph Dum**

16.00: Close