

# **DRAGONESS Kick-off meeting Beijing, China, 11-12 October 2007**

## **DRAFT MINUTES**

**1)** Mr. Guocheng Zhang, Director of National Remote Sensing Center of China (NRSCC) welcomed everybody to Beijing, China. He was pleased to see so many attendants (total of 29, see participant list in Annex A) from both China and Europe and expressed a positive view and expectation of the outcome of the DRAGONESS project. He also emphasized the good link between the joint ESA-MOST Dragon program (2004-2008), notably the marine elements and the DARGONESS Project. In so doing he also mentioned the fact that ESA-MOST has agreed to extend the Dragon program into a 2<sup>nd</sup> phase that indeed would strengthen the link to DRAGONESS.

The kick-off meeting was hosted by Ocean University of China (OUC), which was supported by MOST and OUC.

Then Johnny A. Johannessen together with Prof. He welcomed everybody to the kick-off meeting. Johannessen informed that the European Commission (EC) officially had given the start of the project at 1 September 2007 with the termination on 31 August 2010. The agenda was then slightly annotated and approved (see Annex B). Apologies were received from NSOAS and GKSS for not being able to attend the kick-off meeting.

Following this all the participating partners provided short presentations of their institutes.

**2)** The overall goals of the DRAGONESS project were presented by Johannessen followed by a review and discussion of the description of work. Johannessen also pointed to relevant connections of the project to GOOS and in particular EuroGOOS, and NearGOOS, GODAE as well as GEO/GEOSS. A series of issues was raised for clarifications as listed below:

- Update of Gant Planning to reflect the kick-off of the project at 1 September 2007.
- Nansen-Zhu work effort in WP 3 was agreed to be moved to WP4.
- Institute logo from all partners was requested.
- WP 5 should also start at kick-off, and it was suggested and agreed to revise the work plan to avoid simple redundancy with other WPs. WP5 should propose an executive and visible proposal for capacity building of Chinese marine environment and security monitoring, e.g. EUROGOOS, NEARGOOS.
- Refine each work package plan with flowchart. Avoid redundancy between WPs
- In WP6 it was agreed to consider a merging of the planned workshop and summer school in order to limit costs.

All in all the team revealed enthusiasm about the project. It is clearly a great opportunity to document collaboration and visibility of Chinese and European capacities in monitoring the marine environment. And as many partners also plan to participate in the extended phase of Dragon there is a promising possibility to identify and take benefit of synergy aspects between this program and the DRAGONESS project.

**3)** Johannessen continued with a review of the management structure and financial status of the project. With respect to the regular reporting it was emphasized that each WP leader has the responsibility to monitor the progress and prepare for the reporting according to the milestones and deliverable schedule provided in the Description of Work. In China the organisation and coordination of DRAGONESS is lead by Prof. HE. The two DRAGON coordinators Drs. Yves-Louis Desnos (ESA) and Zenguan Li (NRSCC) has accepted to be members of the DRAGONESS steering committee which is composed of the WP co-leaders and the DRAGONESS coordinator. The steering committee will meet prior to each annual meeting.

The guideline and procedure for the payment, e.g. transfer of money, was reviewed. In order to start any money transfer NERSC requested bank information (bank name and account number, address, swift code, Iban number) from all partners. Per 10 December all this information has been collected at NERSC and all transfer of money for the first payment has been executed accordingly.

**4)** Each work package was then reviewed by the WP leader followed by specification of contribution from each WP partner. All the ppt presentations are available at the DRAGONESS website (available in beginning of January 2008).

*WP1: Review of in-situ observing system*

ORSI/NERSC: (Zhishen Liu and Songhua Wu, J. A. Johannessen, Junwu Tang, Tinglu Zhang, Xueen Chen)

In reviewing and discussing this WP it was emphasized that the availability of in-situ data must distinguish near real time from off-line data. For in-situ monitoring system the demand will always be larger on the former type of availability. Of specific issues addressed were:

- (i) China has in total deployed 35 Argo floats, The T-S profiles are available via the Argo dissemination centre (<http://www.coriolis.eu.org> and <http://argo.ucsd.edu>).
- (ii) The Chinese sea level station data records are transferred to the GLOSS data base.
- (iii) There are about 65 observatories along the Chinese coastal and shelf seas. These sites also include measurements of biogeochemical parameters.
- (iv) There are regular cruises carried out several times every year.
- (v) In general the data from observatories and cruises are available through the specific projects.
- (vi) Data collected as part of NearGOOS are available under restriction (user/password protected).
- (vii) The conditions in Europe are the same for the first two bullets. For the 3<sup>rd</sup> and 4<sup>th</sup> bullets the tendency are also the same, but the situation is now

regularly improving. Data collected within EuroGOOS are normally freely available. The MERSEA project has significantly contributed to the data access, standardization and harmonization of format (NetCDF) and dissemination via internet (OpenDAP) in Europe (see <http://www.mersea.eu.org> for more information on MERSEA)

*WP2: review and utilization of spaceborne observing system*

ORS/ORSI: (W. Alpers, Mingxia HE and Chuanmin Hu, B. Chapron, Lei Guan)

The Chinese satellite program is divided into the meteorological satellite series (FY-n), the ocean satellite series (HY-n), the China Brazil Earth Resources Satellite (CBERS-n), Chinese Remote Sensing Satellite (CRS-n). In the future they will also introduce a dedicated disaster monitoring satellite program (HJ-n).

The operation of HY-1 series (6 planned in total) is dedicated to ocean colour and SST observations. HY-1A recently terminated. Currently HY-1B is in operation flying ocean colour and SST sensors. HY-1B data are available for research and development. Permission for operational access (near real time) to the data will depend on clarification and approval

The HY-2 series is dedicated to ocean dynamics observations. Four satellites are planned. HY-2A will be launched in 2008. It will operate a ku-band scatterometer of the Quikscat type, a radar altimeter and a radiometer for observations of wind field, sea surface height, waves (significant wave height) and sea ice.

The HY3 series is dedicated to ocean watch. Two satellites are planned, with the first launch planned for 2012. It will include a S-band SAR sensor (20 m resolution, 100 km swath) for ship detection, shallow water bathymetry, waves, oil spill, sea ice and IWs.

The disaster monitoring satellite program consists of 11 satellites (2 optical and 1 SAR for tentative launch in 2008) and 4 optical and 4 SAR satellites for launches considered between 2008 and 2010.

Note also that the FY series is operating a MERIS like spectral imager with 20 channels. All in all the Chinese Earth Observation satellite program up to 2020 is very comprehensive and impressive with 12 satellites of HY-n series, 5 satellites of the FY-n series and 11 satellites for disaster monitoring.

The European counterpart satellite program, here only considering the ESA satellite program, in the timeframe towards 2015 can be briefly summarized as follows.

- Envisat is considered to operate until 2010. There are plans to extend the operation further by changing the orbit to a 32 day repeat that will become more fuel efficient.
- The gravity and geoid mission GOCE will be launched on 15 May 2008.
- The soil moisture and salinity mission GOCE is planned for launch in 4<sup>th</sup> quarter of 2008.
- The ice sheet elevation and sea ice thickness mission CRYOSAT is planned for launch in 2009.
- The Sentinel-1 SAR mission is planned for launch in 2011.

- The Sentinel-3 ocean colour, SST radiometer and radar altimeter dual missions are planned for launch in 2012 and 2014.

Access to more detail description and specification of the ESA Earth Explorer and Sentinel mission program are found at <http://www.esa.int> and then go to the left menu and select Observing the Earth.

*WP3. Level of data integration*

ORSI/IFREMER: (Ge Chen, J.-F. Piolle, Zhihua Mao, Keping Du)

In general the Chinese data policy for access to marine data in China are defined according to 5 security levels.

- (i) absolute confidential
- (ii) highly confidential
- (iii) confidential
- (iv) internal
- (v) public

Only in the category of the two latter levels are data available for scientific use. This is clearly more restricted than the ESA data policy where the main requirement for accessing ESA satellite data is that one is registered as a PI. This can be easily done via internet at <http://earth.esa.int> where one click on eopi in the left menu. The next menu will allow one to enter how to get data. In there one find the option on how to electronically submit a short proposal to achieve satellite data. When this proposal is approved one will automatically become a principle investigator.

A Marine and Atmospheric Geographical Information System – MAGIS is established for scientific use in China. It accommodates now up to 50 users .

*WP4: Information production and services*

NMEFC/CLS: (Xuejia Song, Qinzhen Liu, Helene Etienne, Zhi Chen, Yongqi Gao, Chaofang Zhao, Mingqiang Fang)

State Oceanic Administration (SOA) is in charge of the marine environment forecast and information services. SOA consists of 7 national centre, 3 branches and 5 institutes. For more info go to <http://www.soa.gov.cn>.

The operational marine forecasts main national center is NMEFC. In addition there are 3 regional centre; in Qingdao for the North China Sea, in Shanghai for the East China Sea and in Guangzhou for the South China Sea. The set of operating models and warning systems are grouped as follows:

- ocean models (POM/HYCOM global (1/4 degree resolution) and nested POM (3-20 km resolution, and fine resolution FVCOM and MITgm models (100 m – 3 km)
- numerical weather prediction models (MM5, WRF, Ensemble forecasting)
- Wave forecasting models (Global to regional at 1/30 degree resolution)
- Storm surge model is under development
- Sea ice forecasting model is under development
- Tsunami warning system is now developed
- Drift models are now developed

- Algae bloom and ecosystem models are now developed

*WP5: Capacity building*

MOST/GKSS: (Liqin Shao, Roland Doerffer, Delu Pan, Hongping Li)

An overview of large Chinese program and projects were first given including: - Frontiers in marine Sciences, - Asian Monsoon Year 2008, AIPO 973 program under CLIVAR and contributions to GEWEX.

It was also suggested and agreed that WP 5 should start at kick-off. Moreover it was agreed to revise the work plan to avoid simple redundancy with other WPs. WP5 should propose an executive and visible proposal for capacity building of Chinese marine environment and security monitoring, e.g. EUROGOOS、NEARGOOS. The new work plan shall lead to the following 3 deliverables.

- (i) 1<sup>st</sup> report on Chinese and European marine capacity building investigation. It means an investigation of China and Europe marine institutes, centres and organisations. It will focus on existing infrastructure, activity domains and especially major qualified scientists and engineers for each unit. It will be useful for mutual understanding and future cooperation.
- (ii) 2<sup>nd</sup> report on assessment of major gaps between Chinese and European marine capacity building.
- (iii) Final report on future Chinese and European marine capacity building design in order to develop more harmonized global systems of marine monitoring and forecasting beyond the 2010 time frame. This, in turn, may contribute to a more harmonized implementation of GMES/GEOSS.

The work to be included in the 1<sup>st</sup> report will start immediately. Concerning the 2<sup>nd</sup> report it will be based on the outcome and achievements of WPs 1-4, but may also include other information material. The framework of the final report will also start immediately to gradually capture a consensus view by the beginning of the 3<sup>rd</sup> year.

*WP6. Workshop, summer school and symposium.*

NERSC/NZC/ORSI: J.A.Johannessen, HE, Lei Guan and all others

In this WP it was agreed to consider how one could merge the planned workshop and summer school in order to limit costs and take benefit of complementary workshops and training courses. As such the approved extension of DRAGON into a second phase is considered to be highly welcome providing an opening for exactly such an approach.

The DRAGON program covers atmosphere, ocean and land remote sensing and offers satellite data, capacity building, and networking as well as support to young scientists through advanced training courses, workshops and symposium. For instance, the 2<sup>nd</sup> Advanced Training Course in Ocean Remote sensing was organized by SOED, SIO in Hangzhou from 15-20 October 2007. About 60 PhD and master students attended, many from institutes participating in DRAGONESS. The full program can be found at <http://earth.esa.int/dragon/oceantraining2007.html>. A 3<sup>rd</sup> DRAGON training course is expected to take place in China in 2009/2010 and could be an option where elements of DRAGONESS findings are presented. Moreover the annual DRAGON

symposiums might be venues that could be considered for back-to-back DRAGONESS workshops and/or work package meetings. For instance, the final DRAGON-1 symposium is planned in China from 21-25 April 2008. The final DRAGONESS symposium could also be considered co-arranged with the DRAGON-2 symposium in 2010. All of these possibilities must indeed be discussed and eventually clarified with ESA and MOST.

## 5) Review of action items

<b>Action Item</b>	<b>Standing</b>
Update of Gant Planning to reflect the kick-off of the project at 1 September 2007	Open ?
Institute logo from all partners was requested	Open
Revise the WP5 work plan to avoid redundancy with other WPs.	Closed
In WP6 look at possibility to merge workshop and summer schools with activities planned under DRAGON-Phase 2.	Open
Submit report of kick-off meeting to EOS	Closed

All partners must regularly check the Action Item table to make sure that outstanding action pending input from any of the partners will be activated and closed as soon as possible.

## 6) Any other business

Dr. Chuanmin Hu of ORSI/OUC suggested that a report from the DRAGONESS kick-off meeting should be submitted to EOS as a News Item. This was executed on 12 December. The report is enclosed below.

NEWS ITEM submitted to EOS

### **European and Chinese researchers team up towards ocean monitoring**

A joint project between Europe and China to make a concerted effort in ocean monitoring kicked-off with its first workshop held during 11-12 October 2007 in Beijing, China.

The project named DRAGONESS (“DRAGON in support of harmonizing European and Chinese marine monitoring for Environment and Security System”) aims to make an inventory of Chinese and European capacities of marine monitoring for environment and security. Through harmonization of methods and approaches in the frame of international programs such as GOOS (Global Ocean Observing System) and GMES (Global Monitoring for Environment and Security), researchers from the two continents will investigate and compare common procedures in operational ocean monitoring and services as well as management approaches. The outcome of the 3-year project from August 2007 to July 2010 is also expected to make valuable contribution to GEOSS (Global Earth Observation System of Systems GEOSS, Butler, 2005).

One of the key focuses of GEOSS is to make the data accessible to many different groups. Although appearing straightforward, this is indeed a very challenging task. The measurement platforms, protocols, data format, metadata format, quality assurance/quality control protocols, data integration and data portal infrastructure may vary substantially among different programs and research groups. One of the main goals of the DRAGONESS project is therefore to assess and compare the standards used in ocean observing systems covering a variety of platforms in both Europe and China, and then make recommendations on how to make them consistent to facilitate data sharing and information exchange.

China and Europe have a long history in working together to address earth science issues. Their collaboration in remote sensing began in 1991 when the European Remote-Sensing Satellite, ERS-1, was launched. In April 2004, the European Space Agency (ESA) and the Ministry of Science and Technology (MOST) of China made green light to a joint Dragon program for 4 years, with focus on Earth observing from satellites. The Dragon program covers atmosphere, ocean and land remote sensing and offers data, capacity building, networking and support to young scientists through advanced training courses, workshops and symposium. The Dragon program has already reached approval for a second Dragon 2 phase extending from April 2008 to March 2012.

Funded by the European Commission (EC) under the European Union's (EU) Framework Programme (FP6), the DRAGONESS project is a successor of DRAGON as well as several other recently completed and ongoing projects undertaken in both Europe and China, where members of this program also actively participated. Among them are the EU FP5 Marine Environment and Security for the European Area (MERSEA) Strand-1 project, the ongoing EU FP6 MERSEA IP project, and the ESA project MarCoast. The DRAGONESS project will also take stock of the definitions of GMES Fast Track Marine Core Services and Downstream Services that is currently shaping up for EU FP7 funding.

The members of the DRAGONESS project team come from five European institutes (Nansen Environmental and Remote Sensing Center, Norway; GKSS, Germany; Ocean Remote Sensing Consulting, Germany; Institut Francais De Recherche Pour L'exploitation De La Mer, France; Collecte Localisation Satellites, France) and eight Chinese institutes (Ocean Remote Sensing Institute / Ocean University of China; Nansen-Zhu International Research Center; Institute of Atmospheric Physics; National Marine Environmental Forecasting Center; National Satellite Ocean Application Service; Second Institute of Oceanography; Beijing Normal University, National Remote Sensing Center of China).

More than 30 participants attended the DRAGONESS kick-off workshop that was sponsored by MOST and OUC. An official welcome was provided by the director of the National Remote Sensing Center of China (NRSCC), Dr. Guocheng Zhang, followed by detailed review and discussions on project objectives, tasks and milestones. Five work packages are planned, covering review of *in situ* observing systems, spaceborne observing systems, data integration and information management, ocean and coastal information products and services, and capacity building. The next workshop is planned to be held in Norway in late 2008.

For more information please contact the program coordinator Prof. Johnny Johannessen, (Nansen Environmental and Remote Sensing Center, Norway, [johnny.johannessen@nersc.no](mailto:johnny.johannessen@nersc.no)), and Chinese coordinator Prof. Ming-Xia HE, (Ocean Remote Sensing Institute, Ocean University of China, [mxhe@orsi.ouc.edu.cn](mailto:mxhe@orsi.ouc.edu.cn)).

Reference:

Butler, D. 2005. Global observation project gets green light. Nature vol. 433: pg. 789.

## **7) Date and place of next meeting.**

The first annual DRAGONESS meeting is planned at NERSC in Bergen, Norway in the autumn of 2008. Exact date will be agreed early next year.



## Annex A.

### List of participants

No	Name	Institute	Email
1	Johnny A. Johannessen	Nansen Environmental and Remote Sensing Center, NORWAY	johnny.johannessen@nersc.no
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## **ANNEX B**

**DRAGONESS KICK-OFF MEETING**  
**Shen Zhou International Hotel (SZIH)**  
**No.31 South Street ZhongGuanCun Haidian District**  
**BEIJING**  
**11-12 OCTOBER 2007**  
(starting 1400 on Thursday the 11<sup>th</sup>, ending 1900 on Friday the 12<sup>th</sup>)

### **AGENDA**

**Day 1: Thursday 11 October**

**Meeting Room 1**

The DRAGONESS partners from Europe are assumed to arrive in Beijing at different times between the morning of Wednesday 10 October and the morning of Thursday 11 October. The official start of the Kick-off meeting is therefore scheduled to begin in the afternoon.

**Lunch in ShangDao Coffee Shop**

**12:30-13:30**

**1. Welcome**

**14:00-15:45**

The local Chinese meeting organizers Mr. Guocheng Zhang, Director of National Remote Sensing Center of China (NRSCC), together with Prof. Ming-Xia HE and Prof. Lei Guan from Ocean remote Sensing Institute (ORSI) will officially welcome all the DRAGONESS partners to China. They will also go through logistics, etc.

Following this the DRAGONESS coordinator Prof. J.A. Johannessen will welcome everybody to the kick-off meeting.

A “round the table” presentation will allow each partner to give a 3-5 minutes presentation of their institute.

**Coffee Break**

**15:45-16:15**

**2. Project overall goal and DoW review**

**16:15-18:00**

J. A. Johannessen will review the main elements of the Description of Work for the DRAGONESS project. All partners must be prepared to raise issues for clarifications.

**Adjourn**

**18:00**

**Welcome Party at QiLuJingDian Restaurant 18:30**

**Day 2: Friday 12 October**

**Meeting Room 1**

**3. Management, Financial status  
and Contract formalities**

**09:00-10:45**

The coordinator will go through the project management (WP 0) and review the overall budget for the project. In so doing he will emphasize the importance to be compliant with the project management structure and the scientific and financial reporting.

The coordinator will review the main elements of the contract and point to requirements and responsibilities therein. Consideration of need and importance for making a Consortium Agreement will also be initiated for discussion.

**Coffee Break**

**10:45-11:15**

**4. Description of Work Packages**

**11:15-17:30**

Workpackage number by workpackage number the six Workpackage co-leaders (European/Chinese) will present the key content of their Workpackage according to:

- key objectives,
- main working tasks,
- deliverables and
- milestones.

This will be followed by each WP partners presentation of their planned contribution to the WP.

**WP1- Review of In situ observing system**

**11:15 to 12:30**

ORSI/NERSC: (Zhishen Liu and Songhua Wu, J. A. Johannessen, Junwu Tang, Tinglu Zhang, Xueen Chen)

**Lunch in ShangDaoCoffee Shop**

**12:30-13:30**

**WP2- Review and utilization of spaceborne system**

**13:30 to 14:15**

ORS/ORSI: (W. Alpers, Mingxia HE and Chuanmin Hu, B. Chapron, Lei Guan)

**WP3- Level of data integration 14:15 to 15:00**

ORSI/IFREMER: (Ge Chen, J.-F. Piolle, Zhihua Mao, Keping Du)

**Coffee Break 15:00-15:30**

**WP4- Information production and services 15:30 to 16:15**

NMEFC/CLS: (Xuejia Song, Qinzhen Liu, Helene Etienne, Zhi Chen, Yongqi Gao, Chaofang Zhao, Mingqiang Fang)

**WP5- Capacity building 16:15 to 17:00**

MOST/GKSS: (Liqin Shao, Roland Doerffer, Delu Pan, Hongping Li)

**WP6- Workshop, Summer school and Symposium 17:00 to 17:30**

NERSC/NZC/ORSI: J.A.Johannessen, HE, Lei Guan and all others

In preparation for this the co-leaders may contact each of their WP partners for necessary additional input. Note also that in the context of these presentations the use of specific examples are welcome. For instance in WP5 the status of knowledge and expertise gained from GMES and GEO/GEOSS in Europe and China may be provided with some highlights from MERSEA, GODAE etc.

**5. Review of Action Items 17:30-18:00**

During the Kick-off meeting a series of action items may be assigned to individual project partners. When all of these are accumulated towards the end of the kick-off meeting they will be reviewed and properly given a candidate date for completion.

**6. Any other business 18:00-18:30**

Additional point to the agenda and important issues that arise during the kick-off meeting will be collected for discussion under this point.

**7. Agree date/place of 1<sup>st</sup> Progress meeting 18:30-19:00**

**8. Adjourn 19:00**

**Dinner at QiLuJingDian Restaurant 19:30**