EGSIEM Minutes

EGSIEM General Meeting

Date(s) of Meeting:	8. & 9. Jun 2017	Location:	DLR Oberpfaffenhofen
Responsible for Minutes:	Y. Jean/K. Cann-Guthauser	Doc ID:	Project_Meeting_Minutes_Jun2017

Participants	
EGSIEM Management	**EGSIEM Consortium Members**
A. Jäggi / UBERN (AJ) F. Flechtner / GFZ (FF) A. Güntner / GFZ (AG) T. Mayer-Gürr / TUG (TMG)	U. Meyer / UBERN (UM) Y. Jean / UBERN (YJ) J.M. Lemoine / CNES (JML) H. Zwenzner / DLR (HZ) S. Martinis / DLR (SM) S. Bourgogne / G&C (SB) B. Gouweleeuw / GFZ (BG) Z. Li / UL (ZL) Q. Chen / UL (QC) B. Klinger / TUG (BK) A. Kvas / TUG (AK) A. Shabanloui / LUH (AS) M. Weigelt / LUH (MW) H. Steffen / LM (HS) G. Strunz / DLR (GS)

List of Annexes: Presentations by members of EGSIEM and others
- Annex01_WP1_Welcome (AJ)   - Annex02_WP5_GRACE_Status (FF)   - Annex03_WP5_TUG_StatusReport (AK)   - Annex04_WP5_Operational_Service_Run (FF/CG)   - Annex05_WP5_Status_NRT-GNSS_Validation (QC)   - Annex06_WP5_GFZ_Regional_Solutions (FF/CG)   - Annex07_WP6_NRT_Evaluation_GFZ (BG)   - Annex08_WP6_Automated_SAR_Food_Volumes (HZ)   - Annex09_WP6_Wetness_Indicator_ZKI (HZ)   - Annex10_WP3_GIA_Correction_Hydrology (HS)   - Annex11_WP4_Combination_Service-Auxiliary_Products (UM)   - Annex12_WP4_OBP_Validation (UM/LP)   - Annex13_WP4_Two_Year_Validation (QC)   - Annex14_WP4_L3-Products (AK)   - Annex15_WP7_Summer-Autumn_School (AJ/KCG)   - Annex16_Future (AJ)

Agenda Item Nr.	EGSIEM General Assembly, Jan 2017	Action Item
1	**Welcome and purpose of Meeting [Jäggi]**	
	[Annex01_WP1_Welcome](#)

AJ welcomes the EGSIEM members to the Progress meeting.

GS (Head of Department of Georisks and Civil Security at DLR) welcomes the EGSIEM members to DLR EOS (Earth Observation Center) and gives an overview of the DLR EOS.

HZ gives an overview of ZKI at DLR and general information including Lunch, Coffee, and Dinner. AJ advises all that MB will not be able to attend the meeting due to illness, he will endeavour to update all on his SLR group's activities at a later date.

Deliverable 5.4 (reginal solutions product report) authored by GFZ will be submitted in M33

Upcoming deliverables:

D4.2 Scientific Combination (AIUB) due M33 (September 2017).

D4.3 Validation by M33 relies on the validation results at ULux.

D5.3 NRT service report is due M33.

D6.1 Hydrological Service (GFZ) is due M30 (June 2017).

D6.2 Operational hydrological service product report is due M36 (December 2017).

Milestone

All work packages (WP) are supposed to complete their duties by M36.

Action item status

- 006 Publications: we urge publications and dissemination of such by each of the WPs.

- 020 Organizations of sessions in conferences (by ULux): Is too late, but still possible at AGU meeting 2017.

- 021 KCG >AC: How we licence our data (download)

- 022 Summer School: The level of interest is not quite as desired and will be discussed in WP7 once more. Five participants have registered thus far (7 including the competition winners). We are still waiting for more participants and will need to email-all in the community if interest does not increase.

Review comments from the EC reviewer (January 2017)

We received a report from the EC reviewer after the last meeting in January. The contents are broadly positive, but include some suggestions. Extracts of the contents of the review report are shown in the attached presentation. The full report was emailed to all members by KCG on 17th February 2017.

Summary of the contents:

- First of all, the project status is punctual 'like a Swiss clockwork'.
- EGSIEM has the potential for large impact | |

	- Near-real time (NRT) service: good demonstration, but deficiency still to be corrected - Make the project visible outside the fields (e.g. publications) - Make them sustainable: scientific outcomes: technical aspect + marketing - Collaboration of geodesists and hydrologists seems to be working well and should be maintained - One desired solution in the NRT with good description and definition is required Questions/Suggestions: AG: What is the desired service solution? AG,BG: We have a combined product for the hydrological index derived using the two daily solutions from GFZ and ITSG. AJ briefly explained the Copernicus land service and C3S, and the lobby event in Brussels. FF informs all of the visit of Gerhard Kruizinga (JPL) and suggests an open discussion around the topic "impact of pitch bias modification" tomorrow at 1PM. AJ mentions the final meeting in 2018 will be attended by representatives of the EU. Regarding this current progress meeting, the focus is on the NRT service now. For this reason, the NRT WP discussions are allocated on the first day of this meeting. FF: Open discussion is necessary (e.g. deficit in NRT: It should be done in the next six months.) The EGSIEM services should continue in the future. AJ: The gravity field combination service is promising because it is to be continued as a part of the IAG service. The NRT service is not yet ready to continue. MW: Regarding the publications: what is the meaning of the overview paper? Isn't it a technical paper? AJ: A technical paper has been written by YJ. Each WP manager should take care of their own publication plan. UM: In WP4, two papers about the combination service are planned. MW: The NRT should be properly defined. AJ: It should be documented and published. FF: The NRT should demonstrate its usefulness in presentations and publications. The flood events should be diversified to at least 20 other cases besides the Ganges-Brahmaputra river flood in 2007. We need to show statistics.	
2	**WP5 NRT & Regional Service (FF)**	
	Annex02_WP5_GRACE_Status (FF) FF presents a compilation of the materials from previous GRACE internal project meetings. The GRACE satellites are at the end phase of the mission. The altitudes of the satellite orbits have decreased to about 330 km. The mission operation is to extend the lifetime of the satellites as long as possible. However, there are also difficulties occurring at the end of the mission: data gaps since 2011, battery problems, switch-off of an accelerometer (ACC) on GRACE-2, etc. Regarding the SDS status, FF explained the reprocessing of L1B data by JPL, the transplant of the ACC data (the introduced 1-degree pitch angle), and the effect of the pitch bias on phase center corrections. TUG also provided its own phase center corrections. FF invites TUG and other ACs to the	

discussion of the transplant and phase center corrections with G. Kruizinga (from JPL) tomorrow at 1PM. The monthly solutions using single- and dual- accelerometer data contain similar signals up to the degree 20. Above the degree 20, the single accelerometer solution contains more noise. In the mascon solution, the noise decreases. The remaining mission operation till end of 2017 is designed for the dual satellite mission, but the single accelerometer is also an option at the end phase of the mission. The mission is expected to continue beyond June 2017.

Annex03_WP5_TUG_StatusReport (AK)

AK reports on the status of the NRT service and progress since the last meeting, such as automatic update of auxiliary data and testing of new background models. There are no major updates in TUG's next release solution. Regarding the operational service run, the latency is now less than 5 days and has reached the goal of the latency limit which we promised. Regarding the satellite status, the pitch bias was removed during the period when an ACC was switched off and the magnitude of the antenna center correction is increased. The increased attitude error could be reduced slightly by the star camera fusion in the test. The L1B data stream is very heterogeneous. The period from March to May 2017 is divided into four sections for investigation of the effect of the data quality. The accelerometer fusion data is acting as a low-pass filter, as shown by the AIUB AC in the previous meeting last year. The large AOC errors are visible in the range acceleration/SST residuals. Experiments using a band-pass/band-stop filter show the influence of the pitch bias. Details are in a manuscript in preparation.

Questions and Discussions:

FF: Invitation to the discussion of the problems occurred end of Marchin 2017 by JPL's pitch angle modification

Annex04_WP5_Operational_Service_Run (FF/CG)

Regarding the status of RBF (radial basis function), a new version of daily solutions (v221) has been produced for the period from 2002 to 2016. The instrument noise and accelerometer pre-processing were modified. Automatization of the operational NRT service was optimized and is running now. The results of the operational service run are not yet satisfactory. An overview of the processing steps is presented. The validation of daily or derived monthly solutions wrt WGHM or RL05a L2 databy GFZ is not fullyyet as convincing as the monthly mean values when compared to the WGHM model. Validation from the hydrological servicepart, GNSS, and OBP is necessary. The operational test shows the latency is mostly (95%) within two days. The main output products are L3 grids (2° x 2°) and spherical harmonic coefficients up to the d/o 50. A plan is to provide 1° x 1° as well (regional refinements). The quality of NRTs after March 30 2017 has degraded since the L1B antenna phase center correction which shows extremely high noise was turned off. The pitch angle changes and the phase center corrections on 30 March 2017 were also investigated. An overview of the quality using Kalman mean square error from 2002 to 2017 is shown. There is an improvement after the orbits by UBern are applied in the processing. Common problems are observed during the eclipse. Regarding the outlook until M33, the planned works are: investigation of phase center correction problems, reprocessing of NRT test period, and computation of the regional refinements in selected basins.

Action items:

1. Derive on a daily basis plots with common layout of the gravity solutions from both GFZ and TUG
2. Derive statistics of related hydrological events (wetness indices)

AI023

	Annex05_WP5_Status_NRT-GNSS_Validation (QC)	**AI024**

Annex05_WP5_Status_NRT-GNSS_Validation (QC)

Part 1. Validation with GNSS during historical run

The validation of the daily solutions from GFZ and TUG were made using the reprocessed UBern GNSS time series and IGN's latest daily ITRF2014 GNSS residuals. A new criterion using the 'degree WRMS (weighted root mean square) reduction' is used in the validation. Note that WRMS reduction is similar to that used in the OBP validation. Big variations at lower degrees up to the degree 25 are observed in the WRMS reduction at the 394 GNSS stations. The GFZ V201 solution seems to be better than v211/221 solutions. Currently, the TUG solution shows better performance in terms of the WRMS reduction. All of the daily solutions are better than a combination of hydrological (GLDAS), atmospheric (NCEP) and oceanic (ECCO) models by Li et al.

Part 2. Validation with GNSS during operational run

The validation of the NRT daily solutions from the GFZ and TUG for the operational run is done using the JPL and SOPAC daily GNSS data and the rapid solutions from UBern. Time span is just slightly more than two months which is quite short to make strong conclusions. The UBern rapid GNSS solutions and the GRACE daily solutions by GFZ and TUG show quite good agreements with the GRACE daily solutions by both GFZ and TUG. In addition, it seems the UBern rapid solutions show better correlations with daily GRACE data than JPL and SOPAC daily GNSS data. There is an aberration only around 10 May 2017.

Questions/suggestions:

- Investigation of the common low-quality days: common results in most of the stations?
- Remove the non-tidal atmospheric and oceanic effects from GNSS and then see the validation results among different daily GRACE solutions not add them back to daily GRACE solutions.

Annex03_WP5_TUG_StatusReport (AK)

Regarding the regional solution, radial basis functions representations have been fully implemented to be consistent with the GFZ daily solutions. The software packages can be easily integrated and run in parallel with the SHC (spherical harmonic coefficient) solutions. The solutions show a good agreement with the SHC solutions, but there is no gain after the implementation for the NRT service. D5.4 is delayed due to the additional work for the operational service run, as well as the satellite health status, and planned to be submitted by M33.

Annex06_WP5_GFZ_Regional_Solutions (FF/CG)

Regarding the RBF regional status, the development is delayed due to the intensive work load in the NRT service. The concept and the prototype of the RBF were developed. This task is planned to be finished by the end of September 2017 (M33). An overview of the planned processing is explained. The output products are 1 x 1 degree regional products for some defined areas of interest. The plan until M33 is to derive 1x1 degree regional refined solutions for dedicated large river basins which have had historical flood events. The report of the regional solution product (D5.4) is prepared as a concept paper which is already available. Validations of the regional solutions will be done by the hydrological service and summarized in D6.2. FF reports that in addition, two papers are currently in preparation.

3	**WP6 Hydrological Service (AG)**	
	Annex07_WP6_NRT_Evaluation_GFZ (BG)	
	The gravity-based Wetness Index (G-b WI) has been updated when compared to the last version presented, the new indicators show reduced noise and clearer information. The new wetness index was produced using the daily solutions from GFZ and TUG. The input is gridded total water storage anomaly. At each grid, seasonal cycles and secular variations were removed. The gridded values were divided by standard deviation. The output is the unit-less index at each grid. The combined index is produced using both the GFZ and TUG daily solutions. The new wetness index shows very similar pattern in time with respect to the total water storage anomalies from the GFZ and TUG daily solutions in the Danube river basin, but different in the Ganges river basin. It is possibly due to the data gap in GFZ solution (V211). (FF: The new v221 solutions are complete) The signals from the large extreme floods in the Southern hemisphere and low-latitude Northern hemisphere were picked up well, whereas those in the northern hemisphere, especially in Russia, are not often flagged. The indicators are now being tested in GloFAS comparing flood occurrence/warnings at the Joint Research Center (JRC). A test at the Global Drought Observatory (GDO) is planned. Further tests and visualization in NRT service will use GloFAS through WMS-T (DLR) and other databases such as GDO and EM-DAT.	
	Questions/Suggestions:	
	YJ: How are the two daily solutions combined in the new wetness index?	
	BG: It was produced by taking the maximum of the two solutions.	
	UM: correlation to the flood events?	
	YJ: It seems there are stronger indications in other regions than the Ganges-Bramaputra flood by the new wetness index. They can give a hint for further investigation and selection of good examples for the NRT service.	
	GS: Latency?	
	UM: Is it correct to remove the annual signal?	
	YJ: The meaning of the new wetness index: unique and works well	
	>AG: added values of the EGSIEM's hydrological product	
	WG: Are the noise basin-dependent?	
	Annex08_WP6_Automated_SAR_Food_Volumes (HZ)	
	The goals of the task are to establish a method to estimate flood volumes based on the Earth Observation data (EO) and Digital Elevation Models (DEM) and to implement gravity-based flood indicators into the operational workflow at ZKI in DLR. A selected region for study is Bangladesh where active extreme hydrological events occur. Using the SAR image from the Sentinel-1 and ENVISAT, DEM, and Gauge validation data, an accurate flood volume is estimated by combining the DEM and SAR images. The work flow diagram is shown. Gridding method is determined by the slope of the considered region. According to the slope of the region, the grids are tiled further to smaller-sized grids. Flat region is in big tiles and region with slope is in smaller tiles. The thresholds to determine the method to compute water level are different in the uni-modal distribution and bi-model distribution of pixel values. Examples of the flood volume estimations in the Ganges-Brahmaputra river basin and the lower Mekong river basin are demonstrated: 40.13 Gton and 11.12 Gton respectively. The dynamic tiling and the	

threshold for uni-model distributions work well. Vertical resolution of a DEM is important. From a test, the TanDEM-X DEM is expected to provide more accurate results.

Questions/Suggestions:

BG: What is the input water definition?

AG: How are the size and definition of the Ganges river basin?

AG: Comparison with the GRACE?

AJ: Uncertainty?

HZ: 1.73m in RMSE

Annex09_WP6_Wetness_Indicator_ZKI (HZ)

HZ introduces the DLR ZKI (Center for Satellite-based Crisis Information) activities. The ZKI is an operational service at DLR since 2004. It provides information from the remote sensing data for natural and environmental events, humanitarian relief activities, and civil security issues. Activities are in three categories: within Germany, within Europe, and all over the world. HZ also explains the activities with some examples. As an EGSIEM service with the ZKI service, daily GRACE-based wetness index in combination with the ZKI's SAR image service in a well-prepared graphical user interface is demonstrated.

GS (Head of the department including the ZKI in DLR): For the further usefulness of the satellite remote sensing data at ZKI in DLR, we are very interested in the EGSIEM service, such as the GRACE-based wetness index, to learn where the remote-sensing satellites have to image and gain the data.

AG: Precipitation data can be also useful in that direction.

FF: Again, further 30-40 flood cases are necessary. At the end of the project, we should demonstrate statistically proven results.

4	**WP3 Integration of complementary data (QC)**	

Annex10_WP3_GIA_Correction_Hydrology (HS)

HS has been setting up a GIA model for the EGSIEM GIA correction in line with Task 3.8. The ice model and the Earth model are now complete. The application of the observation of the global RSL data, GNSS in America and Europe, and the EGSIEM GRACE result is planned. Regional ice models are provided by colleagues: different models to different areas (e.g. Greenland, Fennoscandia & Barent Sea, North America, Antarctica, and Patagonia). HS faced a problem to be solved: in the present-day geoid rate, there is a peak in peninsular in Antarctica. After subtraction of 1000 years signal, the peak in Greenland is almost disappeared, whereas the peak in Antarctica remains. HS plans to check it with other ice models. HS plans to provide GIA correction based on LM17.3 and VM5a rheology soon within few months. The 3D model and uncertainty are ongoing tasks.

Questions/Suggestions:

Rate: d/o90: is it possible to provide in vertical velocity? Is the 1degx1deg resolution possible?

Action Item: Provide GIA-related information: Gdot, Hdot, Jdot

AI025

5	EGSIEM SLR Splinter Group Update (MB)	
	Owing to ill health will be provided via email.	
6	**WP4: Scientific Service (UM)**	
	UM introduced the WP4 tasks and the related WP4 presentations regarding how to combine AOD product Level3 product, validation using the ocean bottom pressure (OBP), and the GNSS data. **Annex11_WP4_Combination_Service-Auxiliary_Products (UM)** The monthly mean of de-aliasing products by the ACs are different. We need to produce combined AOD product. The AOD means are produced using the weights applied to the combination of the monthly solutions. Since EGU General Assembly 2017, our GRACE monthly combination products are available at our website. Question/Discussion: [1] Combination up to degree 100 or degree 90? (UM) JML: Provide AOD monthly means up to same degree as gravity fields. MW: Why is the AOD monthly mean necessary? UM: Introducing a priori value is not correct. To restore full signal. MW: It is not separable after combination. UM: UM will make a test adding it back prior to NEQ-combination, because it will give a direct answer. Conclusion: truncation at the degree 90. NEQs only contain a priori values up to degree 90, anyway. [2] Is the degree-1 term necessary? (UM) Every processing center skips the degree-1 terms. Conclusion: no degree-1 terms **Annex12_WP4_OBP_Validation (UM/LP)** A new criterion called 'relative explained variance' is used in the validation in ocean bottom pressure (OBP) part. Positive value indicates a good agreement between a GRACE solution and in-situ data. The validation with OBP is not suitable for the monthly solutions as it is for the daily solutions. The GRACE monthly solutions can show better agreement, especially in the higher latitudes, if the time span is longer. Stronger filters provide better results in the validation with OBP. In this OBP validation result, DDK2 shows the best result. Differences in the gridded solution and the spherical harmonic coefficients are probably due to the possible different size of the grid converted from the coefficients. The small number of stations is also a reason why the validation results are not yet good. Questions/Suggestions: - It is necessary to provide the individual input for comparison with respect to the combined solutions. - The validation result is already helpful to learn where we have problem. - Difference in AOD can be also a possible reason for the negative result. AK checked	

	AOD mean without finding any inconsistencies.	
	- It is also necessary to make sure that there is no bug in the computation.	
	Annex13_WP4_Two_Year_Validation (QC)	
	The three EGSIEM combined monthly solutions for two years (normal equation level, solution levels up to the degree 80, and 90) are validated using IGN's latest ITRF2014 GNSS residuals. A new criterion using the 'degree wRMS (weighted root mean square) reduction' is used again in the validation. The individual and combined solutions show similar WRMS reduction over the degree 10. The combined solutions and the TUG monthly solution show better WRMS reduction than other individual solutions. L3 grids filtered using the different DDK filter have also been validated, but these do not show consistent satisfactory performance.	
	Questions/Suggestions:	
	The L3 grid product seems to be problematic at the moment. It would be better to stop the current service of the L3 grid and solve the problem first.	
	Action Item: Remove annual signal from both the GNSS data and the GRACE data.	**AI026**
	Annex14_WP4_L3-Products (AK)	
	AK explains the models used in the conversion to the L3 grids. A dedicated filter for land and ocean application is used. The effects of the filters are visualized. From the validation results in the GNSS and OBP cases, it is clear that problems exist in the conversion process from the L2 to the L3 grid. The next step is to check the possible error sources.	
	Questions/suggestions:	
	UM: Is the empirical covariance matrix acceptable?	
	Agreement: Stop providing the L3 grid until the current problem is solved.	
	Longer time series (Discussion, UM)	
	Though we promised only the two-year combined solution, it is necessary to extend the time span for the applications of the combined solutions. ACs can make one more effort to produce a longer time-series of monthly solutions from 2004 to 2010. The AC's answers are	
	- TUG AC: already done in ITSG2016. - GRGS AC: will produce degree 90 solutions in the longer time span until September 2017. - GFZ AC: RL6 in preparation. - AIUB AC: not so easy to produce within limited time due to time-consuming manual screening process. Recycling of RL2 screening can shorten the process.	
	Recommendation: ACs to provide a longer time-series of their monthly solutions from 2004 to 2010	
7	**WP7: Dissemination and Exploitation (AJ)**	
	Live EGSIEM Plotter Update (SB)	
	SB explains the updates of the EGSIEM plotter such as the new L3 grids from the EGSIEM combined solutions. SB also demonstrates how to use the updated EGSIEM plotter. The	

description of the L3 grid details is also available online. Users can download the time-series as well. One more update of the EGSIEM plotter is the wetness index in a grid format. At the moment, only TUG daily solution is available. SB will request CG to provide GFZ daily solution.

Key features:

- Database problems solved by a twist in the code (at least temporarily, and should suffice for the project). Attempt to switch to MongoDB, but finally too complicated and time-consuming to change the whole database system (steep learning curve + software requirements on the server).

- Inclusion of daily data on the website

- Inclusion of revised L3 products.

- Plan to introduce L2 products filtered with DDK5

- Plan to introduce daily products by GFZ, cf. CG

- Plan to introduce new revision of L3 products (cf. AK).

- Proposal to use our image software for consistent images across EGSIEM products (NRT), cf. BG & AG.

Comment/Suggestions

We need a unified format: SB can manage it.

UM: Level 2 DDK5 filtered solutions are necessary to be compared with other available solutions.

We need to make a direct link to make our product more visible on the main page of our website.

To show: five figures including the three versions of wetness index and the daily solutions

Put in one page so that the users can compare them directly.

SB can add one more tab to the menu line of the website.

It is necessary to make an automated process to update the figures on a daily basis.

Dissemination of combined products (Discussion, UM)

UM: we have to create a FTP for our sub-products such as hydrological and OBP products.

Final version of the L3 grids will be uploaded as soon as it is ready.

Is the current visualization of the combination products on our website OK?

(e.g. the web address '…/tools', the text describing the products)

Annex15_WP7_Summer-Autumn_School (AJ/KCG)

The project would like to acknowledge the generous support of the BMBF and GFZ. The summer school will be held at GFZ in September 2017. A dedicated page on the website is available. The summer school has been announced via posters, social media, the IAG Newsletter and via 2 x announcements to all European geodesy faculties. Seven participants have registered so far. We need to increase the number of participants up to the maximum number of 50.

	Comment/Suggestions: MW: Send a reminder, it works well usually. Potential mailing lists? GRACE science team meeting newsletter HS: geodynamical and cryological societies and Earth tide symposia Details of the summer school TMG: How is the freedom in allocation of lecture and lab session? Resources: a large lecture room and three smaller rooms in GFZ Participants should bring their laptops and MATLAB software should be installed. Contact: GFZ secretary and KCG Lecturers who have not yet sent the description of their lectures to KCG should do so <u>ASAP</u>.	
8	**Future Perspectives (AJ)**	
	Annex16_Future (AJ) From our 3-year efforts, we will have prototypes of our products. We have to think now about how to continue our efforts which we have made within EGISEM. The combination service in WP4 will be continued through the IGFS. We presented the EGSIEM combination service at the IAG Executive Board Meeting (EBM) during the EGU General Assembly 2017. The service will be adopted in the next IAG EBM during the upcoming IAG Scientific Assembly 2017 an will be called COST-G. We need to discuss how to label ourselves: service processing centers? Our purpose is to stay at the service level. The Level 2 spherical harmonic coefficients will be provided by AIUB and Level 3 will be provided by GFZ. We also try to continue the service to the next GRACE FO mission. The IAG service activity is without funding. We have to discuss the funding sources of the services. Future NRT service: - GFZ has a likely funding source for CG to continue the processing of daily solutions at GFZ in 2018. - TUG can provide daily solutions by AK for the next 1~1.5 years. Future Hydrological service: - At the moment, the hydrological service by GFZ has no plan after the EGSIEM. - ZKI can continue the service by HZ. (with JRC) The ESA ADDCON, which is interested in the future gravity mission and flood and drought monitoring, suggested a joint meeting with us. A joint workshop with invitations for EC representatives is envisaged, if more results can be shown for flood monitoring. We have to consider other H2020 Space calls in 2018/19 as well to continue our services.	

10	Close (AJ)	
	AJ thanked HZ for organising the meeting and all for attending and their input. He advised that the next project meeting would take place most likely in January. However a supplementary meeting was planned of 1 day, again in Oberpfaffenhofen on 4/5 October 2017 (HZ will check availability.)	

Action Item Status List (open and new AI's)				
A.I.	Originator	Actionee	Action Description	Due Date
006	EGSIEM	WP Managers	Collect ideas for paper topics to set up a publication plan	Continuous
023	EGSIEM	G&C, GFZ (AG/BG)	Upload information of the statistics on the hydrological information derived from the GFZ and ITSG daily solutions regularly	
024	EGSIEM	GFZ (AG/BG)	Select and use 30 more hydrological events (mainly floods) besides the Ganges-Bramaputra river flood in 2007	
025	EGSIEM	HS	Provide GIA-related information: Gdot, Hdot, Jdot	
026	EGSIEM	UL	Subtract the annual signals in validation (QC)	

EGSIEM Project Meeting Minutes

Bern, Jun 2017