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BY COURIER SERVICE WITH ACKNOWLEDGEMENT OF RECEIPT

Subject: Accompanying letter to the request for amendment No. 3 to grant agreement No. 619039 Project Title “DESSIN”

Dear Ms. Markova,

this letter is to explain and justify in detail the changes that are requested in the grant agreement No 619039 of the DESSIN project, and in part A and part B of its Annex I. Changes requested in part A and part B of this Annex I have already been embedded in the electronic version of Annex I provided at the NEF system of the EC Research Participant Portal.

Modification of Annex I – Description of Work

1. Changes related to shift of resources within WP34 (beneficiaries 5 Chemitec, 10 Telint, 13 EYDAP, 18 NTUA) and to WP23 (beneficiary 16 DHI):

As explained in chapter 2.2.6 of the 2nd periodic project report, development of the software in WP23 turned out to be more resource-intensive than originally foreseen, also because the full extent of the complexity and comprehensiveness of the ESS valuation framework delivered by WA1 had not been fully foreseen at proposal stage. Hence, beneficiary 16 DHI notified the coordinator of a need for more resources (+ 2PM) in order to fully complete the WP23 tasks.

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This can be solved internally among the consortium members without changing the overall requested EC contribution, because some work in the Athens case study (WP34) turned out to be less resource-intensive than originally foreseen.

Furthermore, the progress of work on the demonstration plant in WP34 turned out to require a slightly different distribution of workload and activities of the involved beneficiaries 5 Chemitec, 10 Telint, 13 EYDAP and 18 NTUA (while nature scope of their tasks is unchanged), and also the need to include a new subcontracting task for beneficiary 13 EYDAP.

The need for change in resource allocation among the partners within WP34 is due to the fact that the solution demonstrated in this WP is achieved by combination of several hardware and software components provided and developed by several beneficiaries, and at proposal stage it could not be exactly foreseen which of these components needed more adjustment and work in order to ensure a proper functioning and demonstration of the solution delivered by the complete package.

Hence, the requested changes do not change the scope and nature of the work within WP23 and WP34 as defined in Annex I, but rather ensure a more efficient use of resources to achieve the objectives of both WPs, tackling the small deviations within these two WPs reported in the 1st and 2nd periodic report, while ensuring that the overall requested EC contribution of the project is unchanged.

The following table provides the details of the requested budget changes within the abovementioned WP34 beneficiaries and the transfer of some resources to WP23 beneficiary 16 (DHI).

In summary, the requested changes add up to +/- € 0,00 in requested EC contribution (€ 20641,64 + € 4655,00 + € 22512,00 + € 5375,36 - € 53184,00 = € 0,00).

1a) Overview of requested budget changes for the abovementioned beneficiaries (positive values indicate an increase, negative values a decrease in the beneficiaries' budget):

	DHI	EYDAP	CHEMITEC	NTUA	TELINT
	89%	20%	60%	60%	60%
Indirect Cost Model (% of direct cost)					
Additional personnel in WP23 (activity: RTD)					
monthly direct rate	7.281,00 €				
monthly indirect rate	6.480,09 €				
monthly total rate	13.761,09 €				
additional Person Months (PM)	2,00			1,24	-8,31
additional PM direct cost	14.562,00 €			5.704,00 €	66.480,00 €
additional PM indirect cost	12.960,18 €			3.422,40 €	39.888,00 €
additional PM total cost	27.522,18 €			9.126,40 €	106.368,00 €
funding rate	75%	50%	50%	50%	50%
additional requested EC contribution	20.641,64 €	1.155,00 €	22.512,00 €	4.563,20 €	53.184,00 €
Indirect Cost Model (% of direct cost)					
Additional personnel in WP34 (activity: DEMO)					
monthly direct rate		5.500,00 €	3.000,00 €	4.600,00 €	8.000,00 €
monthly indirect rate		1.100,00 €	1.800,00 €	2.760,00 €	4.800,00 €
monthly total rate		6.600,00 €	4.800,00 €	7.360,00 €	12.800,00 €
additional Person Months (PM), negative value if reduced		0,35	9,38	1,24	-8,31
additional PM direct cost		1.925,00 €	28.140,00 €	5.704,00 €	66.480,00 €
additional PM indirect cost		385,00 €	16.884,00 €	3.422,40 €	39.888,00 €
additional PM total cost		2.310,00 €	45.024,00 €	9.126,40 €	106.368,00 €
funding rate		50%	50%	50%	50%
change in requested EC contribution for personnel in WP34		1.155,00 €	22.512,00 €	4.563,20 €	53.184,00 €
Additional other direct and subcontracting cost WP 34 (activity type: DEMO)					
additional other direct cost	- €	- €	- €	1.015,21 €	- €
additional other indirect cost	- €	- €	- €	609,12 €	- €
additional subcontracting	7.000,00 €	- €	- €	- €	- €
additional total other and subcontracting cost	7.000,00 €	- €	- €	1.624,33 €	- €
funding rate	50%	50%	50%	50%	50%
Change in requested EC contribution for other & subcontr.	3.500,00 €	- €	- €	812,16 €	- €
Total change in requested EC contribution	4.655,00 €	22.512,00 €	22.512,00 €	5.375,36 €	53.184,00 €

1b) The budget shifts among partners as detailed in 1a) include additional subcontracting cost for beneficiary EYDAP (€ 7 000,00 under DEMO, i.e. requested EC contribution of € 3 500).

This subcontracting is necessary in order to achieve the project objectives. It does not at all change the tasks of EYDAP as described in the DoW. The scope and nature of the subcontracting work we are proposing here is fully in line with the overall subcontracting principle of DESSIN that is already described in the current version of the DoW (GA Annex I part B chapter 2.4 p. 77):

“In principle, the DESSIN consortium is complete and has the key expertise for carrying out the tasks of the project. However, there are some task that are either minor services (e.g. logistical support in the execution of meetings, layout/printing services) or requiring highly specialised equipment or expertise not available in the consortium because they are beyond the core activities of the beneficiaries, such as e.g. special transport services, special analytical techniques.”

The subcontracting for special analytical services intended here by beneficiary EYDAP is justified as follows:

The objective of WP34 is to demonstrate a specific solution for water re-use in Athens. In order to achieve this objective, compliance of the treated water with pertinent regulations needs to be demonstrated. The Greek legislation regarding water reuse includes, among others, the determination of certain priority pollutants on a regular basis. More specifically, the limit values specified in the Greek National legislation regarding wastewater reuse for unrestricted irrigation and urban reuse were introduced by the JMD 145116/2011 and incorporate the monitoring of 19 heavy metals and 43 priority pollutants. This is dictated by the legislator in case of wastewater reuse for Wastewater Treatment Plants with a population equivalent greater than 100 000 citizens. However, EYDAP does not provide, at the moment, water reuse options on an operational basis, hence the necessary equipment for the analysis of such pollutants are not available at EYDAP. The development of such methods and infrastructure just for the purpose of the DESSIN project is an unviable option. To be more precise, for efficiently analyzing heavy metals and priority pollutants at concentrations below the legislation’s threshold, EYDAP would have to buy extremely expensive equipment such as Gas Chromatographer and Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES). Hence, we propose to subcontract this analytical service to a suitable laboratory which will perform the analysis based on standard and reliable methods.

2) Changes related to subcontracting by beneficiary 16 (DHI) within WP23

In order to ensure proper development of deliverables D23.1, D23.2 and D23.3 (software framework for working with the ESS evaluation methodology delivered by Work Area 1), a 3-days workshop & training course held at DHI is needed, attended by the beneficiaries responsible for contributing the specifications to the software and by the intended end-users of the software (demo-site owners from WPs 31 to 35 in DESSIN), as outlined in chapter 2.2.6 of the 2nd periodic report. Carrying out the workshop entails catering for the participants, to which purpose DHI requests to have € 835 of subcontracting costs allocated (WP23, RTD, i.e. an EC contribution of € 626,25). In order not to change the granted EC contribution for the project, DHI proposes to enable this by internal shift from its budget allocated for travel costs under WP23.

The following table summarises the new budget for beneficiary DHI [transfer of resources for additional 2 PM to DHI from TELINT’s WP34 budget as outlined in section 1a) plus budget-neutral internal shift from DHIs travel (other direct cost) to subcontracting]:

COST TYPE	ACTIVITY TYPE				TOTAL
	RTD	DEM	MGT	OTHER	
Funding rate	75%	50%	100%	100%	
Personnel	131.058,00 € ¹	18.203,00 €	- €	- €	149.261,00 €
Subcontracting	835,00 € ²	- €	- €	- €	835,00 €
other direct costs	12.765,00 €	- €	- €	- €	12.765,00 €
Actual indirect cost (on personnel only)	116.641,62 €	16.200,67 €	- €	- €	132.842,29 €
TOTAL	261.299,62 €	34.403,67 €	- €	- €	295.703,29 €
Req. Funding	195.974,72 €	17.201,83 €	- €	- €	213.176,55 €

¹ € 116.496,00 from original DHI budget plus € 14.562,00 transferred from TELINT as detailed in section 1a)

² For catering by a subcontractor to enable the workshop explained in section 2)

3) Changes related to subcontracting by beneficiary 19 (SINTEF):

Beneficiary SINTEF requests a transfer within its DESSIN WP 32 (DEM) budget from cost category 'other direct cost' (equipment) to subcontracting, to lease and maintain water samplers, including calibration and testing. The cost for subcontracting will be € 5 000 (DEM activity, i.e. EU contribution of € 2 500). The need to sub-contract this work is due to recent organisational changes at SINTEF with discontinuation of the unit which was planned for this task. The discontinuation of this unit could not be foreseen at grant preparation stage. The subcontracted activity does not concern the research work itself, but covers just a minor service, the supply of water samplers, including the maintenance, calibration and testing of these, which are needed in order to carry out the research activities.

In financial terms, we propose only a re-distribution of financial resources within the DESSIN budget of beneficiary SINTEF, ensuring that the maximum contractual EU contribution of beneficiary SINTEF will remain unchanged. These changes also do not affect the budget of SINTEF's third party SINTEF Energi AS.

4) Changes related to subcontracting by beneficiary 9 (SEGNO)

Beneficiary SEGNO requests a transfer within its DESSIN WP31 budget from cost category 'other direct cost' (travel) to subcontracting, in order to enable a correction (re-programming) of programmable logic controllers (PLC) used in the remote control network at the Emscher demo site, where real-time control (RTC) of Combined Sewer Overflow (CSO) units is demonstrated. The costs will be € 2 375 (DEM activity, i.e. EC contribution of € 1 187,50).

The subcontracting will not change the tasks of SEGNO nor their total requested EC contribution as described in the DoW, but is a pre-condition to enable the actual DEM activities by SEGNO together with beneficiary EG at the CSO demo sites within WP31. The PLC units are one component of the RTC solution that is demonstrated at the Emscher site, and as this demo is running in a real operating environment under specific regulatory stipulations imposed by the responsible water authority, the re-programming of the PLCs needs to be done by the original supplier (for warranty/liability reasons). The need for these changes could not be foreseen at grant preparation stage, because at that stage it had not been clear which ones of the >90 very different CSO units in the demo area 'Emscher' were going to be selected for the demonstration (as explained in detail in the accompanying letter to DoW amendment 02, section on subcontracting for beneficiary EG), and hence also the detailed stipulations by the water authority before they approve the demonstration at these sites had not been known completely.

The reduction in travel cost for SEGNO is feasible, because a newly established remote dial-in feature to the RTC solution installed at the demo site leads to a reduction of travels to the demo site by SEGNO staff.

In financial terms, we propose only a re-distribution of financial resources within the DESSIN budget of beneficiary SEGNO, ensuring that the maximum contractual EU contribution of beneficiary SEGNO will remain unchanged.

5) Changes related to subcontracting by beneficiary 15 (CETaqua)

CETaqua requests several changes in the list of subcontracting items given in chapter 2.4.3 of Annex I part B. In total, the requested change lead to a change from EUR 50 759 to EUR 50 528 for subcontracting. In detail, the requested changes indicated in 2nd, 4th, 5th and 6th bullet point of CETaquas subcontracting items in the abovementioned chapter are justified as follows:

- 2nd bullet point, change from EUR 8 000 to 6 170 (RTD): the hydrogeochemical modelling in WP22 that was originally foreseen to be subcontracted can now be carried out by the beneficiary's own staff, because they have hired staff with the required expertise. However, there is some minor additional work in this WP that requires subcontracting: in order to assess the ecosystem impact of the ASR solution developed with WP, several biological and physico-chemical parameters need to be measured and assessed on the water and aquifer. Two indicators that cannot be analysed by CETaqua, because they require very specific equipment and expertise, are analysis of biofilms and stygofauna. Hence it is requested to subcontract this very specific analytical work.
- 4th bullet point, change from EUR 6 000 to 2 823 (DEM): no need to subcontract hydrogeochemical modelling in WP35, for same reasons as mentioned above for WP22. However, also in the demonstration activity at the Llobregat site in WP35 some very specific analytical work (analysis of viruses) cannot be carried out by the beneficiary CETaqua due to lack of very specific equipment and expertise for this type of analysis. Hence, it is requested to subcontract this very specific analytical work.
- 5th bullet point: change from EUR 10 000 to EUR 8 632 (DEM): no need to subcontract expertise on seawater intrusion in multilayer aquifers in WP35, for same reasons as mentioned above for WPs 22 and 35. However, there is a need for additional subcontracting in WP35 for organizing several meetings at the Llobregat demo site, with relevant stakeholders and relevant actors, who are interested in or involved in the demo. This requires cost allocation for minor services and costs that are not part of the scientific work but necessary to ensure success of the demonstration and the related meetings, e.g. rental of venues, catering, translation, printed materials production and transportation services.
- 6th bullet point: change from EUR 10 400 to EUR 16 544 (OTHER): in order to maximize outreach, dissemination and impact of DESSIN, we request to increase the subcontracting budget for WP41 activities. In particular, increased cost are associated with costs for images, design and printing of communications material (EUR 6 544), and video production (EUR 10 000) which requires subcontracting to specialized companies in video production. Within WP41, beneficiary CETaqua will be responsible for producing two videos: a general one about the whole DESSIN project, and a specific one about the Llobregat demonstration site near Barcelona, which is not included in the video production subcontracting budget of beneficiary KWR that is taking care of the production of videos about other DESSIN demo sites except the one in Llobregat.

Although the total cost for subcontracting at CETaqua is slightly reduced by these changes (from EUR 50 759 to EUR 50 528), their requested EC contribution for subcontracting is slightly increased (from EUR 37 579 to EUR 40 078.50), due to shifts from activity type DEM to OTHER. In order not to change the contractual maximum EC contribution for this beneficiary, this is compensated by slightly reducing 'other direct cost' in WP35. This can be done without changing or compromising the work planned in WP35.

In summary, all the budget shifts explained above do not change the contractual maximum EC contribution of DESSIN, and only slightly affect the EC contribution to SMEs, which will still be above 46% of the EC contribution once the above mentioned changes are applied (condition of the call was >30%).

Changes to contractual documents:

According to the requested changes outlined above, the following changes were made to Annex I part A and B of the EC-GA:

Part A

- WP 22: extended duration of WP and T22.1 from M24 to M48
- WP 23: increased PM for beneficiary 16 (DHI) from 6 to 8
- WP 34: increased PM for beneficiary 18 (NTUA) from 25,5 to 26,74
- WP 34: increased PM for beneficiary 5 (Chemitec) from 24 to 33,38
- WP 34: increased PM for beneficiary 13 (EYDAP) from 28 to 28,35
- WP 34: decreased PM for beneficiary 10 (TELINT) from 12 to 3,69
- WP 34: extended duration of T34.3 from M24 to M48
- WP 34: added EYDAP to T34.3 and T34.4
- Adjusted budget tables of beneficiaries 5 (Chemitec), 9 (SEGNO), 10 (TELINT), 13 (EYDAP), 15 (CETAqua), 16 (DHI), 18 (NTUA) and 19 (SINTEF) according to requested budget shifts and changes as outlined above, without changing the contractual maximum EU contribution for the DESSIN grant agreement.

Part B

- Chapter 1.3.2. overall gantt chart of DESSIN updated (extension of WA 2 and WP 22 to M48)
- Chapter 1.3.2.2 caption and gantt chart updated (extension of WA and WP22/T22.2 to M48)
- Chapter 2.3 Table 8 budget breakdown of beneficiary CETAqua and its 3rd party updated (aligned with change in subcontracting of CETAqua according to chapter 2.4)
- Chapter 2.3 Table 9 budget breakdown of beneficiary SINTEF and its 3rd party updated (aligned with change in subcontracting of SINTEF according to chapter 2.4)
- Annex I part B chapter 2.4.1 text, figure 7 and table 11: adjusted according to requested budget and PM shifts.
- Annex I part B chapter 2.4.2 figure 8 adjusted according to requested budget and PM shifts.
- Annex I part B chapter 2.4.3 first sentence and table 12: adjusted according to requested budget shifts.
- Same chapter, sections "Travel cost" and "other direct cost" adjusted according to requested budget shifts.
- Same chapter, section "Subcontracting": adjusted first sentence (total subcontracting budget within DESSIN) and extended/updated sections on beneficiaries 9 (SEGNO), 13 (EYDAP), 15 (CETAqua), 16 (DHI) and 19 (SINTEF) by detailed information about the additional subcontracting requested.

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