



**UNDP/GEF PROJECT ENTITLED “REDUCING ENVIRONMENTAL STRESS IN THE
YELLOW SEA LARGE MARINE ECOSYSTEM”**

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Proposed Regional Criteria for Calculating Costs of Activities

The *FULL TIME EQUIVALENT AGREEMENT*

What is Full Time Equivalent (FTE)

Full-time equivalent (FTE) is a way to measure a worker's productivity and/or involvement in a project. An FTE of 1.0 means that the person is equivalent to a full-time worker (and, usually, it is just one). An FTE of 0.5 may signal that the worker is only half-time, or that his projected output (due to differences in qualification, for example) is only half of what one may expect. This figure is generally calculated by defining labor costs that include consideration of: the number of operational shifts per day, number of working days per person/unit, average amount of holidays, sick-leave or days off due, an agreed amount of surplus working days in order to cope with ad hoc situations etc.

Typically, different scales are used to calibrate this number, depending on the type of institution (university, industry, research) and scope of the report (personnel cost, productivity), and the number may also incorporate costs additional to those of labor, such as; Management; Manpower, manager's salaries, stationary, utility costs, insurance; Raw Materials; Electricity, Transport, Rent, Water; Research machinery rental, equipment depreciation and consumable tools, etc.

The Full Time Equivalent (FTE) Agreement

An increasing number of institutes are recognising the numerous benefits of establishing long-term outsourcing strategies with Contract Research Organisations (CROs)¹. A fairly novel approach to a partnership type of relationship between a sponsor and a CRO is the Full-Time Equivalent (FTE) agreement, or contract.

According to the FTE contractual agreement, the CRO provides the client with a project team dedicated to the client's studies for a specified period of time at a fixed rate per FTE unit. This rate should include elements such as: Direct labour costs; Management and Supervision costs; Cost of differences associated with researchers/analyst experience

¹ This terminology has been used in this text defining the FTE. However it is not necessary for the project to use this terminology. It may be more appropriate to use, for instance, Contract Executing Body (CEB), as it may be an institution, or an individual.

levels; and Overtime pay costs. Other activity costs may be incorporated or left as pass-through costs, for example; QA review; Sample stability storage; Sample management; Instrument calibration; Report generation; costs of columns, standards, special equipment, sample disposal and shipping.

The suitability of this programme depends on the nature and scope of the work, the timing, timelines and duration of the studies, as well as the level of commitment that both parties are willing to invest in the business relationship.

One key difference of the FTE agreement from a traditional bid or contract is the contractual obligation of the CRO to have a dedicated and consistent team of scientists for the sponsor's programme.

The pricing structure is one in which the sponsor (in this case UNDP/GEF Yellow Sea Project) pays a fixed rate per FTE, independent of the workload, analytical method or compound. This is in contrast to the traditional contract, in which the sponsor's fee is based on a per-sample and/or per-test basis. A single document for multiple studies is often sufficient for an FTE contract, while a variety of quotes are required for different types of projects in the traditional outsourcing process.

Under an FTE agreement, both sponsor and CRO work jointly to manage the resources relevant to the outsourced work. In the traditional contract structure, this is primarily the responsibility of the CRO.

The FTE agreement provides a steady source of revenues for the CRO. As a result, projections of financial performance become more accurate. This is particularly beneficial to the CRO, since the influx of work is often variable and revenues are difficult to predict. With multiple programmes covered by one contract and a fixed rate per FTE, preparation of quotations, bids, purchase orders and invoices is more efficient and straightforward.

The FTE programme is more cost effective than traditional contract arrangements, from a sponsor's viewpoint. The cost savings primarily stem from less time spent providing detailed information (stability protocols, analytical methods, etc.) for quote preparation, review of bids and invoices, financial management of project costs and revision of contracts and budgets when the scope of the work changes.

How the FTE Agreement Relates to the Yellow Sea Project

The benefit of the FTE with regards to the Yellow Sea Project Activity cost calculation process is that the FTE agreement provides a steady source of revenues for the CRO. As a result, projections of financial performance become more accurate. This is particularly beneficial to the CRO, since the influx of work is often variable and revenues are difficult to predict. With multiple programs covered by one contract and a fixed rate per FTE, preparation of quotations, bids, purchase orders and invoices is more efficient and straightforward.

For the sponsor, an FTE program may be advantageous in terms of responsiveness by accelerating project timelines and maintaining the flexibility for unforeseen changes in scope of work and priorities. Having project staff familiar with and accountable for its studies can equate to less time devoted to managing crises, technical and compliance issues.

How is FTE Agreement/Contract Developed?

The development of an FTE agreement consists of several key sections as outlined below (refer Table 1 for an example of an FTE Calculation matrix):

1. **The Definition of Scope of work:** The specific activities and the nature and extent of the work should be well-defined. The more details supplied in the beginning, the less likely it is that miscommunication and misinterpretation will occur. It is critical to be able to identify the type, nature and scope of the work that is to be contracted out at this early stage. This information will help determine the cost, number of FTEs, timelines and other principles of the contract.
2. **The Definition of Term or duration of contract:** This section defines the term and the length of time the contract is in effect. The sponsor guarantee is stated in terms of assurance of FTEs for the stated period of time, while the CRO contractually agrees to the allocation of the dedicated FTEs for the defined workload and time period.
3. **Calculation of Staffing Requirements:** In an FTE contract, the number and type of FTE (e.g. Research, Data QA/QC) based on the expertise should be stated defined. In addition, the specific functions, aside from laboratory work covered by the FTE agreement (training, project management, QA review, sample management) should also be defined.
4. **Calculate Number of FTEs Required Initially and for Each Month:** Based on the work that is to be outsourced, plan start and completion dates of project milestones. For each task, determine the time required to complete the work, using the available information on analytical methods, number of samples, number of storage conditions and other tasks that will be billed to the client (training, laboratory investigations and retests). Using established internal time standards and past experience, calculate the total labour hours per month and the number of FTEs required per month. For this, it is important to define the number of hours in a work week (40/35 hours) for accurate tracking of labour hours, for example: How many hours are recognised per week or per day (40 hours or 35 hours a week/eight hours or seven hours per day)? – Refer Table 1 for FTE labour/hours equivalents.

Table 1. Labour-Hours and FTE Equivalents

1.0	Full time (8 hours/day)	.601	4 days/week (6 hours/day)	.437	3 & 1/2 hours/day
.875	7 hours/day	.594	4 & 3/4 hours/day	.375	3 hours/day
.844	6 & 3/4 hours/day	.531	4 & 1/4 hours/day	.313	2 & 1/2 hours/day
.8	4 days/week	.5	Half Time (4 hours/day)	.287	4 days/week (3 hours/day)
.75	6 hours/day	.469	3 & 3/4 hours/day	.25	2 hours/day
.625	5 hours/day	.456	3 days/week (6 hours/day)	.125	1 hour/day

Other considerations for calculating labour costs are: Is management and supervision included in the cost? Are there different costs associated with analyst experience levels? Is overtime pay included in the cost? Is QA review included or excluded? Is stability storage included? Are sample management, instrument calibration and report generation included? Are the costs of columns, standards, special equipment, sample disposal and shipping incorporated in the costs or are they pass-through costs? The rate per FTE per month is then provided and will vary depending on the type of expertise needed and nature of the work performed (refer Table 2. for an example of an FTE calculation). The

contract/agreement should also contain stipulations on monitoring and reporting of FTE labour hours.

The terms and conditions for addition or decrease in the original number of FTEs must be defined in any FTE agreement. The lead time required for any change in the number of FTEs, any guarantee clauses (X % of the total number of FTEs are guaranteed for Y period of time), penalties or cancellation fees may also be taken into consideration.

Controlling the utilization of the FTEs by both parties requires that the number of labour hours be tracked regularly on a given project or FTE type for a defined period. The systems and processes needed to monitor and evaluate the FTE hours should be as simple and straightforward as possible. Critical decisions for amending the contract are generally based on the information generated by this report. The financial performance of the FTE agreement can be measured most effectively on a regular basis by cost analysis of the studies and budget review.

The following table (Table 2) is an example of cost calculation for two sample sub-activities. The 'Standardised Daily Rate' of USD120 used in column 'G' was developed taking into consideration: salary scales and Cost of Living Indexes of the participating countries; supporting costs in the participating countries, including social benefits, office and office facilities, supporting systems of the institutions; middle level of UN professional staff salary.

One of the main outputs for each RWG is to prepare a list of agreed activities to fulfil the Project objectives. Then, the RWGs will then calculate the cost of each activity based on the explanations in this document: scope of work; terms of contract; staff requirements; and required FTEs initially and for each month.

It should be noted that most RWG members already receive basic salary from various other sources. Therefore, this should be taken into consideration when calculating column 'F,' "staff requirements."

The RWGs will agree on the method to calculate activities, and produce a table, using the example below, to calculate the cost for each agreed activity.

Table 2: EXAMPLE 'Calculating FTE' for Sub-Activities.

A	B	C	D	E	F	G	H
SUB-COMPONENT	ACTIVITY	SUBACTIVITY	SCOPE OF WORK (days/week, # working weeks) (see Table 1 - Labour Hours and FTE equivalents)	DURATION (weeks)	STAFF REQUIREMENTS	STANDARDIZED DAILY RATE (USD)	FTE CALCULATION (USD) THIS COLUMN = ((E*F)*D)*G
Stock Assessment	Activity 3	Gathering Existing Stock Assessment Methods and Prepare Suggested Methods	0.25 (2 hours/day)	12	2	120.00	720.00
Mariculture and Production	Activity 2	Prepare a draft Joint research plan	1.0 (Full time, 8 hours per day)	18	1	120.00	2,160.00