

Table 1. List of requirements for the eBCD Project.

Requirements management of BCD				
Ref.	Requirement	Id.	Description	
R0001	Recording of catch information	1.	- A new BCD will be created in the system for each bluefin tuna catch.	
		2.	- The master of the fishing vessel or the trap operator or his authorized representative or the authorized representative of the flag CPC or of the trap shall be responsible for completing this information and requesting its validation. In case that each fish is tagged, no validation will be required and information on tag numbers and each tagged fish's weight shall be recorded. - The system shall allow such information to be transmitted by an automated system into the eBCD system by a secure transfer protocol as established by the Contractor.	
		3.	- In the event of bycatch or by recreational fishing, the BCD may be generated by the CPC designated authority on behalf of the person responsible for the catch.	
	R0002	BCD Number Assignment	4.	- A unique code will automatically be assigned to the new BCD. The number shall be sequential for each CPC by the order of issuance.
			5.	- The structure would be "CC"= {country code system ISO-1366 alpha2}; "YY" = "the last two digits of the year of the catch"; "123456"= "BCD sequence number by CPC and year" always 6 digits with "zeros" in the empty positions
	R0003	Catch data recording	6.	- The recording of all the required Catch data will be permitted. - The system will generate an alert for any catch amount greater than the individual vessel, fleets and/or CPC total allocated quota.
			7.	- The completion of the following data will be facilitated with pre-loaded lists: <ul style="list-style-type: none"> ▪ Vessel or trap ▪ Fishing area ▪ Fishing gear
			8.	- The system will reject entries for which the required data have not been completed and/or not within valid range(s).
			9.	- The recording of catches by unregistered vessels will be permitted for cases where vessel registration is not required by ICCAT management measures.

Requirements management of BCD			
Ref.	Requirement		Description
			<p>10. - The system will allow the recording of the tag identifiers applied to each individual tuna caught.</p> <p>- The BCD shall have the Catch Information correctly completed.</p> <p>- ICCAT observers shall have read access to BCDs associated with the deployment.</p>
	R0004	Government Validation of the Catch	<p>11. - The system should alert the flag CPC Authority that an eBCD is awaiting validation (via automated email).</p> <p>12. - The Government Authority of the CPC of the flag or trap will be the exclusively allowed to validate the catch data entered.</p> <p>13. - The person responsible for the catch shall be informed of the completion of the validation (via automated email).</p> <p>14. - Validation shall be performed using digital user certificates.</p>
R0005	Recording of trade information for live fish		<p>15. - The master of the fishing vessel or his authorized representative or the authorized representative of the flag CPC shall be responsible for completing Trade Information for Live Fish Section (except "Date of signature" and "signature" in Importer/Buyer Section) and requesting the validation.</p> <p>16. - In case of transfers between farms a new live fish trade section shall be automatically generated by the system and completed by the operator of the farm or the authorized representative of the farm</p> <p>17. - Enter of trade data into a BCD shall be allowed only for the BCDs for which catch data has been completed and officially validated.</p> <p>18. - In the case of international trade the section on the trade of live fish shall be completed before the first transfer operation. - For domestic trade of live fish this information is not required.</p>
	R0006	Recording of Sale/Export data	<p>19. - The recording of all the required data of the product to be sold will be permitted.</p> <p>20. - The recording of the data of Seller or Exporter responsible for Sale/Export will be permitted.</p> <p>21. - The completion of the following data will be facilitated with pre-loaded lists: <ul style="list-style-type: none"> ▪ Export company's name and address ▪ Farm of destination (and thereby corresponding its CPC and ICCAT FFB No.) </p>

Requirements management of BCD			
Ref.	Requirement	Id.	Description
		22.	- The system will reject entries for which the required data have not been completed and/or are not within valid range(s).
	R0007 Government Validation of Sale/Export	23.	- The flag CPC of the vessel or the trap shall be responsible for validation. The system should alert the flag CPC Authority that an eBCD is awaiting validation (via automated email).
		24.	- The Government Authority shall be permitted to validate the data entered both of the product and of the seller/exporter.
		25.	- Validation shall be performed using digital user certificates.
		26.	- The person responsible for sale shall be informed of the completion of the validation (via automated email).
	R0008 Recording of buyer/importer data	27.	- The recording of the "Date of signature" and "signature" in Importer/Buyer Section will be permitted only by the buyer or importer responsible for Purchase/Import.
		28.	- The trade section must have the information about the product and the Seller/Exporter completed and officially validated.
		29.	- The completion of the following data will be facilitated with pre-loaded lists: <ul style="list-style-type: none"> ▪ Import company's name and address
R0009	Recording of the Transfer BFT is sometimes transferred from one farm to another. In this cases, additional TRANSFER sections will be required and the system shall be able to create this.	30.	- The master of the fishing vessel or his authorized representative or the authorized representative of the flag CPC shall be responsible for completing this information.
		31.	- Transfer Information will only be completed in the case of live fish.
		32.	- The entering of transfer data into the BCD shall be allowed only for the BCDs for which catch data has been completed and officially validated.
		33.	- The recording of the data of the towing vessel and the towing cage will be permitted.
		34.	- The recording of the data of the number of fish dead during transfer and the total weight of dead fish will be permitted.
		35.	- The completion of the following data will be facilitated with pre-loaded lists: <ul style="list-style-type: none"> - Towing vessel's name (and thereby corresponding flag and ICCAT No.)

Requirements management of BCD

Ref.	Requirement	Id.	Description	
R0010	Recording of Transshipment	36.	- The master of the fishing vessel that makes the transshipment or his authorized representative or the authorized representative of the flag CPC shall be responsible for completing this information and requesting its validation. In the case that each fish is tagged, no validation will be required.	
		37.	- The Transshipment Information shall only be completed in the case of dead fish.	
		38.	- Entry of Transshipment data into a BCD shall be allowed only for the BCDs for which catch data has been completed and officially validated.	
	R0011	Recording of Transshipment data	39.	- The recording of the data of the carrier vessel and transshipped product will be permitted.
			40.	- The completion of the following data will be facilitated with pre-loaded lists: <ul style="list-style-type: none"> ▪ Carrier vessel's name (and thereby corresponding flag and ICCAT No.) ▪ Port name (and thereby corresponding port state)
			41.	- The system will reject entries for which the required data have not been completed and/or not within valid range(s).
	R0012	Government Validation of Transshipment	42.	- The CPC of the flag shall be responsible for the validation.
			43.	- The Government Authority shall be permitted to validate the transshipment data entered.
			44.	- Validation shall be performed using digital user certificates.
			45.	- The person responsible for the transshipment shall be informed of the completion of the validation (via automated email).
R0013	Recording of Farming (Fattening) Information When BFT is transferred from one farm to another or one cage to another, or is a carried-over, a new FARMING section will be required and the system shall be able to create this.	46.	- The operator of the farm or his authorized representative or an authorized representative of the CPC of the farm shall be responsible for completing this information and requesting its validation	
		47.	- Entry of Farming data into a BCD shall be allowed only for the BCDs for which transfer data has been completed and officially validated.	
		48.	- The system shall be able to generate a separate farming section for each BCD when fish is carried-over from a given year to the next year and identified as a carry-over declaration.	

Requirements management of BCD				
Ref.	Requirement	Id.	Description	
		49.	- The system should detect entries of carried-over fish on 30 May each year and generate an ICCAT carry-over declaration which should be automatically forwarded to CPC authorities.	
		50.	- The CPC authority shall confirm the carry-over declaration quantities.	
	R0014	Recording of Farming data	51.	- The recording of the data of the farming facility, the cage, caged fish and size composition of caged fish will be permitted.
		52.	- The completion of the following data will be facilitated with pre-loaded lists: <ul style="list-style-type: none"> ▪ Name of Farm (and thereby corresponding CPC, ICCAT FFB No. and location) 	
		53.	- The system will reject entries for which the required data have not been completed and/or not within valid range(s).	
	R0015	ICCAT Regional Observer's Information and Signature	54.	- The ICCAT Regional Observer will be permitted to enter his or her name and number and sign the farming information by means of a second password.
		55.	- ICCAT Regional Observers shall have access to BCDs associated with their deployments.	
	R0016	Government Validation of Farming	56.	- The farm CPC shall be responsible for validation.
		57.	- The validation cannot be made without the ICCAT Regional Observer's signature.	
		58.	- Validation shall be performed using digital user certificates.	
		59.	- The person responsible for farming shall be informed of the completion of the validation (via automated email).	
R0017	Recording of Harvesting Information	60.	- The operator of the farm or his authorized representative or an authorized representative of the CPC of the farm shall be responsible for completing this information and requesting its validation.	
		61.	- The BCD cannot be opened unless the Farming Information is completed and officially validated.	
	R0018	Recording of Harvesting data	62.	- The recording of harvesting data will be permitted only if farming section has been completed.
		63.	- The system will reject entries for which the required data have not been completed and/or are not within valid range(s).	

Requirements management of BCD				
Ref.	Requirement	Id.	Description	
	R0019	ICCAT Regional Observer's Information and Signature	64.	- The ICCAT Regional Observer will be permitted to enter his or her name and number and sign the harvesting information by means of a second password.
	R0020	Government Validation of Harvesting	65.	- The CPC of the farm shall be responsible for validation.
			66.	- The validation cannot be made without the Observer's signature.
			67.	- Validation shall be performed using digital user certificates.
68.	- The person responsible for harvesting shall be informed of the validation (via automated email).			
R0021	Recording of Trade Information (dead fish Commercial Information)	69.	- The national seller or exporter or his authorized representative or an authorized representative of the CPC of the seller/exporter shall be responsible for completing this information and requesting its validation except for "Date of signature" and "signature" in Importer/Buyer Section.	
		70.	- The BCD cannot be opened unless the Catch Information is completed and officially validated. In the case that each fish is tagged, no validation will be required.	
R0022	Recording of Sale/Export data	71.	- The recording of all the required data of the product to be sold will be permitted.	
		72.	- The recording of the data of the Seller or Exporter responsible for Sale/Export will be permitted.	
		73.	- The completion of the following data will be facilitated with pre-loaded lists: <ul style="list-style-type: none"> ▪ Export company's name and address ▪ CPC of destination 	
		74.	- The system will reject entries for which the required data have not been completed and/or not within valid range(s).	
R0023	Government Validation of Sale/Export	75.	- The CPC of the seller/exporter shall be responsible for validation.	
		76.	- The Government Authority will be permitted to validate the data both of the product and of the seller/exporter entered.	
		77.	- Validation shall be performed using digital user certificates.	
		78.	- The person responsible for sale will be informed of the completion of the validation (via automated email).	

Requirements management of BCD

Ref.	Requirement	Id.	Description	
	R0024 Recording of Purchase/Import data	79.	- The recording of the "Date of signature" and "signature" in Importer/Buyer Section will be permitted only by the Buyer or Importer responsible for Purchase/Import.	
		80.	- The trade section must have the product and Seller/Exporter information completed and officially validated.	
		81.	- The completion of the following data will be facilitated with pre-loaded lists: <ul style="list-style-type: none"> ▪ Import company's name and address 	
R0025	Recording of Re-export Information	82.	- A new Bluefin Tuna Re-export Certificate (BFTRC) will be created in the system for each re-export of bluefin tuna.	
		83.	- A unique code will automatically be assigned to the new BFTRC - The re-exporter shall be responsible for completing this information and requesting its validation	
	R0026 Recording of Import and Re-export data	84.	- The re-exporter or his authorized representative or an authorized representative of the CPC of the re-exporter shall be responsible for completing this information and requesting its validation except for "Date of signature" and "signature" in Import Section. - The user shall be able to access the BCDs associated with the transaction.	
		85.	- The recording of all the required data of the bluefin tuna for re-export will be permitted.	
		86.	- The completion of the following data will be facilitated with pre-loaded lists: <ul style="list-style-type: none"> ▪ CPC ▪ BCD number(s) associated with the transaction ▪ Product type 	
		87.	- The system will reject entries for which the required data have not been completed and/or not within valid range(s).	
	R0027	Re-exporter Declaration	88.	- The Re-exporter shall be permitted to sign the re-export information by means of a second password.
	R0028	Importer Declaration	89.	- The Importer shall be permitted to sign the re-export information by means of a second password.
	R0029	Government Validation of Re-export	90.	- The CPC of the re-exporter shall be responsible for validation.
			91.	- The CPC Authority will be permitted to validate the data both of the product and of the re-exporter entered.

Requirements management of BCD			
Ref.	Requirement	Id.	Description
		92.	- Validation shall be performed using digital user certificates.
		93.	- The person responsible for re-export will be informed of the completion of the validation (via automated email).
R0030	BCD search	94.	- Search for BCD by different filters will be permitted.
R0031	BFTRC search	95.	- Search for BFTRC by different filters will be permitted.
R0032	Editing of BCD data	96.	- The editing of BCD data will be permitted.
		97.	- A BCD may only be modified by users with read/write permissions for the section requiring modification before validation by the CPC authority.
		98.	- A BCD may be modified after validation only by the validating authority or by an administrator upon request from a CPC.
		99.	- All modifications made to a validated BCD shall be recorded in a historical record storing the modified data, the person responsible for the modification and the date thereof.
R0033	Editing of BFTRC data	100.	- The editing BFTRC data will be permitted.
		101.	- A BFTRC may only be modified by users with read/write permissions for the section requiring modification before validation by the CPC authority.
		102.	- A BFTRC may be modified after validation only by the validating authority or by an administrator upon request from a CPC.
		103.	- All modifications made to a validated BFTRC shall be recorded in a historical record storing the modified data, the person responsible for the modification and the date thereof.
R0034	Printing the BCD	104.	- Once recorded, the option to print will be given at any time with the sections completed so far.
R0035	Printing the BFTRC	105.	- Once recorded, the option to print will be given at any time with the sections completed so far.
		106.	- The printing of copies of the associated BCD will be permitted.

Requirements management of BCD

Ref.	Requirement	Id.	Description
R0036	Record of ICCAT Regional Observers	107.	- <i>The system must allow to save the list of ICCAT Regional Observers by season and by deployment number.</i>
	R0037 Recording of new ICCAT Regional Observer data	108.	- <i>The system must allow the registration of new observers by the administrators. A unique identification code will be generated for each observer.</i>
		109.	- <i>The completion of the following data will be facilitated with pre-loaded lists taken from the observer database, e.g. name, number, ICCAT number, nationality etc.</i>
	R0038 ICCAT Regional BFT Observer Editing	110.	- <i>The system must allow the modification of the data of registered observers by the administrators.</i>
		111.	- <i>The system must allow the delisting of observers at any time by the administrators.</i>

Table 2. Catalogue of the data recorded and link to the eBCD project.

Data catalogue related to BCD management		
Ref.	Requirement	Description
R0039	Data of the BCD itself	<ul style="list-style-type: none"> - <i>ICCAT number of the bluefin tuna catch document</i>
R0040	Catch Information	<ul style="list-style-type: none"> - <i>Name of catching vessel or trap</i> - <i>Name of the other fishing vessels</i> - <i>Flag State/CPC</i> - <i>ICCAT record No.</i> - <i>Individual quota</i> - <i>Catch (used individual quota)</i> - <i>Date</i> - <i>Catch area</i> - <i>Gear used</i> - <i>Number of fish</i> - <i>Total weight</i> - <i>Average weight</i> - <i>ICCAT record number for joint fishing operation (if applicable)</i> - <i>Tag Number and each corresponding weight (if applicable)</i> - <i>Government validation</i>
R0041	TRADE INFORMATION for Live Fish	<ul style="list-style-type: none"> - <i>Live Weight</i> - <i>No. of fish</i> - <i>Zone</i> - <i>Point of Export/departure</i> - <i>Export Company's Name</i> - <i>Export Company's Address</i> - <i>Farm of Destination</i> - <i>State/CPC of the farm</i> - <i>ICCAT FFB No.</i> - <i>Signature</i> - <i>Date</i> - <i>Description of transport</i> - <i>Import Company's name</i> - <i>Point of Import/Destination</i> - <i>Import Company's Address</i> - <i>Date</i> - <i>Signature</i> - <i>Government validation</i>
R0042	Transfer Information	<ul style="list-style-type: none"> - <i>ICCAT transfer declaration No.</i> - <i>Name of towing vessel</i> - <i>Flag</i> - <i>ICCAT record No.</i> - <i>Number of fish dead during transfer</i> - <i>Total weight of dead fish (kg)</i> - <i>Towing Cage No.</i>

Data catalogue related to BCD management		
Ref.	Requirement	Description
R0043	Transshipment Information	<ul style="list-style-type: none"> - <i>Name of carrier vessel</i> - <i>Flag</i> - <i>ICCAT record No.</i> - <i>Date</i> - <i>Name of port</i> - <i>Governing State of port Description of product type and weight (F/FR; RD/GG/DR/FL/OT)</i> - <i>Total weight (net) by product type</i> - <i>Government validation</i>
R0044	Farming Information	<ul style="list-style-type: none"> - <i>Name of farm</i> - <i>Farm flag/CPC</i> - <i>ICCAT FFB No.</i> - <i>Farm location</i> - <i>Participation in national sampling programmes (yes or no)</i> - <i>Caging date</i> - <i>Cage No.</i> - <i>Number of fish</i> - <i>Total weight</i> - <i>Average weight</i> - <i>Name of ICCAT Regional Observer</i> - <i>ICCAT Regional Observer Number</i> - <i>ICCAT Regional Observer's signature</i> - <i>Estimated size composition (<8 kg, 8-30 kg, >30 kg)</i> - <i>Government validation</i>
R0045	Harvesting Information	<ul style="list-style-type: none"> - <i>Date of harvesting</i> - <i>Number of fish</i> - <i>Total round weight</i> - <i>Average weight</i> - <i>Tag number(if applicable)</i> - <i>Name of ICCAT Regional Observer</i> - <i>ICCAT Regional Observer's Signature</i> - <i>ICCAT Regional Observer Number</i> - <i>Government validation</i>

Data catalogue related to BCD management		
Ref.	Requirement	Description
R0046	Trade Information(for dead fish)	<ul style="list-style-type: none"> - <i>Description of product type and weight (F/FR; RD/GG/DR/FL/OT)</i> - <i>Total net weight by product type</i> - <i>Point of Export/Departure</i> - <i>Export Company's Name</i> - <i>Export Company's Address</i> - <i>CPC of destination</i> - <i>Signature</i> - <i>Date</i> - <i>Description of transport</i> - <i>Import Company's Name</i> - <i>Point of Import/Destination</i> - <i>Import Company's Address</i> - <i>Signature</i> - <i>Date</i> - <i>Government validation</i>
R0047	Re-export Data	<ul style="list-style-type: none"> - <i>BFTRC document Number</i> - <i>Re-exporting Country/Entity/ Fishing Entity</i> - <i>Point of re-export</i> - <i>Type of product imported (F/FR; RD/GG/DR/FL/OT)</i> - <i>Net weight (kg) of each type of product imported</i> - <i>Flag(s) of the fishing vessel(s) or CPC of establishment of the trap</i> - <i>BCD number(s) and date(s) of import</i> - <i>Type of product re-exported (F/FR; RD/GG/DR/FL/OT)</i> - <i>Net weight (kg) of each type of product re-exported</i> - <i>Corresponding BCD number(s) of those indicated above</i> - <i>CPC of destination</i> - <i>Name of the certifying re-exporter</i> - <i>Address of the certifying re-exporter</i> - <i>Signature of the certifying re-exporter</i> - <i>Date</i> - <i>Name and address of the importer of the consignment of bluefin tuna in the importing CPC</i> - <i>Signature of the representative of the importer</i> - <i>Date</i> - <i>Point of import: city and CPC</i> - <i>Government validation</i>
R0048	CPC validation data for Catch, Trade for live fish, Transshipment, Farming, Harvesting and Trade for dead fish	<ul style="list-style-type: none"> - <i>Name and title of authority</i> - <i>Date</i> - <i>Signature (and government seal)</i>

Data catalogue related to BCD management		
Ref.	Requirement	Description
R0049	ICCAT Regional Observer list data for Catch, Farming and Harvesting	<ul style="list-style-type: none"> - ICCAT Regional Observer's Name - ICCAT Regional Observer's Signature - ICCAT Regional Observer Number

Requirements Management of vessels, traps, farms and ports				
Ref.	Requirement	Id.	Description	
R0050	Management of vessels	112.	- The system will keep the list of vessels authorized to operate for bluefin tuna.	
	R0051	Recording of vessel information	113.	- The recording of all the required vessel information will be permitted.
			114.	<ul style="list-style-type: none"> - The completion of the following data will be facilitated with pre-loaded lists: <ul style="list-style-type: none"> ▪ Flag CPC ▪ Length type ▪ Type of vessel – ISSCFV category ▪ Type of gear – ISSCFG category ▪ Type ▪ Area ▪ Country
			115.	- The system will import the list of authorized vessels under a prescribed format based on the current templates defined by ICCAT for exchanging this information with the CPC's.
			116.	- The system will reject entries for which the required data have not been completed and/or are not within valid range(s).
	R0052	Authorization of vessels	117.	- The system will establish the period of authorization of each registered vessel to operate with bluefin tuna.
			118.	- The system will renew the period of authorization by storing a historical record of the previously authorized periods.
	R0053	Editing of vessel information	119.	- The system will allow modification of the registered vessel information.
			120.	- The system will allow the deregistration of registered vessels.
	R0054	Vessel search	121.	- The system will allow for searching of registered vessels using different filters.
R0055	Management of traps	122.	- The system will keep the list of traps authorized to operate with bluefin tuna.	

Requirements Management of vessels, traps, farms and ports					
Ref.	Requirement	Id.	Description		
	R0056	Recording of trap information	123.	- The recording of all the required data of traps will be permitted.	
			124.	- The system will import the list of authorized traps under a prescribed format based on the current templates defined by the ICCAT for exchanging this information with the CPC's.	
	R0057	Authorization of traps	125.	- The system will establish the period of authorization of each registered trap to operate with bluefin tuna.	
			126.	- The system will allow for the renewal of the period of authorization as confirmed by CPC authorities, and storing records of the previous authorizations.	
	R0058	Editing of list of traps	127.	- The ICCAT Secretariat shall be informed of all the modifications made by a CPC in its list of registered traps.	
			128.	- The system will allow modification of the registered trap information.	
	R0059	Trap search	129.	- The system will allow a search for registered traps using different filters.	
	R0060	Management of farms		130.	- The system will keep the list of farms authorized to operate with bluefin tuna.
		R0061	Recording of farm information	131.	- The recording of all the required data of the farms will be permitted.
132.				- The completion of the following data will be facilitated with pre-loaded lists: <ul style="list-style-type: none"> ▪ Farm (and thereby corresponding CPC, ICCAT FFB No. and location) 	
133.				- The system will allow the import of list of authorized farms under a prescribed format based on the current templates defined by the ICCAT for exchanging this information with the CPC's.	
R0062		Authorization of farms	134.	- The system will recognize the period of authorization of each registered farm to operate with bluefin tuna.	
			135.	- The system will allow the renewal of the period of authorization by storing a historical record of the previously authorized periods.	
R0063		Editing of farm information	136.	- The system will allow for the modification of the registered farm information.	
			137.	- The system will allow the deregistration of farms.	
R0064	Farm search	138.	- The system will allow a search for registered farms using different filters.		

Requirements Management of vessels, traps, farms and ports			
Ref.	Requirement		Description
R0065	Management of ports		139. - <i>The system will keep the list of ports authorized to land and/or tranship bluefin tuna.</i>
	R0066	Recording of port information	140. - <i>The recording of all the required data of the ports will be permitted.</i>
			141. - <i>The completion of the following data will be facilitated with pre-loaded lists:</i> <ul style="list-style-type: none"> ▪ <i>Port name</i> ▪ <i>Port state</i>
			142. - <i>The system will allow importing the list of authorized ports under a prescribed format based on the current templates defined by the ICCAT for exchanging this information with the CPC's.</i>
	R0067	Authorization of ports	143. - <i>The system will recognize the period of authorization of each registered port to operate with bluefin tuna.</i>
			144. - <i>The system will allow renewal of the period of authorization and storing records of the previous authorizations.</i>
	R0068	Editing of port information	145. - <i>The system will allow changes to the registration of port information.</i>
			146. - <i>The system will allow the deregistration of ports.</i>
	R0069	Port search	147. - <i>The system will allow a search for registered ports using different filters.</i>

Data catalogue related to management of vessels, traps, farms and ports

Ref.	Requirement	Description
R0070	Vessel data	<ul style="list-style-type: none"> - <i>ICCAT list number*</i> - <i>International Radio Call Sign (IRCS)*</i> - <i>Registration number*</i> - <i>Name*</i> - <i>Flag CPC*</i> - <i>Length (m)*</i> - <i>Length type*</i> - <i>GRT(t)*</i> - <i>Type of vessel – ISSCFV category*</i> - <i>Type of gear – ISSCFG category*</i> - <i>Authorized period*</i> - <i>Bycatch*</i> - <i>Active previous year*</i> - <i>Type*</i> - <i>Area*</i> - <i>Quota assigned*</i> - <i>Year of quota*</i> - <i>Owner's name*</i> - <i>Owner's address*</i> - <i>Owner's city*</i> - <i>Owner's post code*</i> - <i>Owner's country*</i> - <i>Owner's phone number</i> - <i>Owner's fax number</i> - <i>Owner's e-mail</i> - <i>Operator's name*</i> - <i>Operator's address*</i> - <i>Operator's city*</i> - <i>Operator's post code*</i> - <i>Operator's country*</i> - <i>Operator's phone number</i> - <i>Operator's fax number</i> - <i>Operator's e-mail</i> - <i>IMO number</i> - <i>Date of construction</i> - <i>Nation of shipyard</i> - <i>Home port</i> - <i>Depth to main deck (m)</i> - <i>Power (HP)</i> - <i>VMS installed</i>
R0071	Trap data	<ul style="list-style-type: none"> - <i>ICCAT No.</i> - <i>Country</i> - <i>Name</i> - <i>Registration number</i> - <i>Name(s) of the owner(s)</i> - <i>Address of the owner(s)</i> - <i>Name(s) of the operator(s)</i> - <i>Address of the operator(s)</i> - <i>Location/Lat Lon</i>

Data catalogue related to management of vessels, traps, farms and ports		
Ref.	Requirement	Description
R0072	Farm data	<ul style="list-style-type: none"> - <i>ICCAT FFB number</i> - <i>Country</i> - <i>Name</i> - <i>Registration number</i> - <i>Name(s) of the owner(s)</i> - <i>Address of the owner(s)</i> - <i>Name(s) of the operator(s)</i> - <i>Address of the operator(s)</i> - <i>Location/Lat Lon</i> - <i>Farming capacity (t)</i>
R0073	Port data	<ul style="list-style-type: none"> - <i>Port</i> - <i>ICCAT ID number</i> - <i>Country</i> - <i>Port code</i> - <i>Authorization period</i> - <i>Permitted hours</i> - <i>Permitted place(s)</i> - <i>Gear type</i> - <i>Activity</i>

Table 3. Requirements of the eBCD project with regards to Joint Fishing Operations (JFO) options.

Requirements Joint Fishing Operations management (JFO)			
Ref.	Requirement		Description
R0074	Recording of JFO		148. - The system will allow recording joint fishing operations.
	R0075	Recording of JFO application	149. - The recording of an application for authorization for a joint fishing operation will be permitted.
			150. - The application shall be recorded at least 10 days prior to the operation start date.
			151. - The completion of the following data will be facilitated with pre-loaded lists: <ul style="list-style-type: none"> ▪ Flag CPC ▪ Vessel ICCAT Record No. ▪ ICCAT Record No. of JFO ▪ Vessel individual quota <ul style="list-style-type: none"> ▪ The system will allocate catch figures based on preloaded allocation key(s) and alert CPC if the figure exceeds individual vessel quota.
			152. - The system will reject entries for which the required data have not been completed and/or not within valid range(s).
	R0076	Displaying of JFO	153. <ul style="list-style-type: none"> ▪ The system will automatically display fields in point 151 by entering the JFO number.
R0077	JFO search	154. - The system will allow a search for registered joint fishing operations using different filters.	

Table 4. Catalogue of data recorded under the Joint Fishing Operations option for the eBCD.

Data catalogue related to Joint Fishing Operations Management (JFO)		
Ref.	Requirement	Description
R0078	<p>Joint fishing operation data</p> <p>There must be a mechanism to ensure that the data contained in the JFO database is the same as that included in the BCD. If there is any discrepancy, the system shall reject it.</p> <p>There must be a mechanism to ensure that catch attributed to each vessel will be calculated in accordance with allocation keys.</p>	<ul style="list-style-type: none"> - <i>Respondent flag</i> - <i>Year</i> - <i>Respondent agency</i> - <i>Address</i> - <i>Person in charge</i> - <i>Phone number</i> - <i>Fax</i> - <i>Email</i> - <i>ICCAT Record No. of JFO</i> - <i>Description of each participating vessel:</i> <ul style="list-style-type: none"> o <i>Number of operation</i> o <i>Flag CPC</i> o <i>ICCAT Record No.</i> o <i>Duration of the operation</i> o <i>Identity of the operators</i> o <i>Individual quota of the vessel</i> o <i>Allocation key between vessels</i> o <i>Farm of destination</i>

Table 5. Catalogue of data requirements with regards to split shipment options.

<i>Requirements of the eBCD project with regards to split shipment options</i>				
Ref.	Requirement		Id.	Description
R0079	Split shipment options		155.	<i>The system will allow recording split shipment.</i>
	R0080	Split shipments	156.	<i>Whenever BFT (live or dead) is split, it will create additional section(s) in the original BCD as necessary.</i>
			157.	<i>- The additional section(s) will have the original BCD number plus an Abbreviation for each Section plus a branch number “-01”, “-02”, etc. Abbreviations are: TD for trade; TS for transshipment; CG for caging (Farming); and HA for harvesting. Example is CA-13-123456-TD-01.</i>
			158.	<ul style="list-style-type: none"> ▪ <i>There must be a mechanism to ensure that the total number of BFT recorded in all BCDs including additional sections is the same as the original number of fish.</i> ▪ <i>The system will allow printing of split BCD with information contained in the original BCD.</i>
			159.	<i>- The system must stop processing BCDs when the total number of BFT harvested from the same cage becomes more than the number of BFT caged.</i>

Table 6. Requirements of the eBCD project with regards to group BCDs.

<i>Requirements of the eBCD project with regards to group BCDs</i>				
Ref.	Requirement		Id.	Description
R0081	Grouping BCDs options			<i>When BCDs are grouped at the time of caging, a new Grouped BCD will be created with a new BCD number.</i>
			160.	<i>All original BCD will be de-activated, but the system will enable relevant users to look at all original BCDs.</i>
	R0082		161.	<i>The new BCD number will have “-G” at the end.</i>
			162.	<i>The system will allow the creation of a “Group BCD” through the selection of BCD numbers. It will also calculate the total BFT number and weight of all the original BCDs and include these figures in the Farming Information Section of the Grouped BCD.</i>
		163.	<i>The system will reject grouping cases which do not comply with the conditions for grouping BCDs [see. par 6 of Rec. 11-21].</i>	

Table 7. Internet, network and software technical requirements for the eBCD project.

TECHNOLOGICAL REQUIREMENTS		
Ref.	Requirement	Description
R0083	Web application	- <i>The development of a web application will be carried out.</i>
R0084	Development technology	- <i>.NET technology (asp.net and Microsoft Framework 4.0)</i>
		- <i>SQL Server 2008 R2 database</i>
R0085	Accessibility	- <i>Web application accessible via the Internet</i>
R0086	System availability	- <i>The system must be available 24hx7d</i>
R0087	Recovery times	- <i>RTO:</i> <ul style="list-style-type: none"> o <i>Less than one hour</i> - <i>RPO:</i> <ul style="list-style-type: none"> o <i>2 – 6 hours</i>
R0088	Data backup policy	- <i>RPO: 6 hours</i>
R0089	Number of users	- <i>A maximum of 100 concurrent users is estimated.</i>
R0090	Access security level	- <i>The SSL protocol will be used for all accesses to the web application.</i>
R0091	Authentication	- <i>Three options, depending on user group:</i> <ul style="list-style-type: none"> o <i>Digital client certificate</i> o <i>Username and single password code.</i> o <i>Username and two password codes.</i>
R0092	Storage	- <i>The recording of about 3,500 entities (BCD) a year is estimated. Each entity will store information in approximately 10 tables (possibly several records per table).</i>
		- <i>The system will offer the option of attaching documents to the BCD in several formats: PDF, Excel or Word.</i>
R0093	Connectivity	- <i>The system must have secure access to other systems currently housed in the ICCAT infrastructure.</i>
R0094	Scalability and flexibility	- <i>The possibility is considered of including improvements in the system that could involve a significant increase in the number of users or in the physical storage space. This possibility has to be included in the infrastructure proposal.</i>
R0095	Confidentiality	- <i>A data confidentiality agreement is required.</i>

SOFTWARE REQUIREMENTS		
Ref.	Requirement	Description
R0096	Web Server	- <i>Microsoft IIS 6.0 or superior</i>
R0097	Database	- <i>Microsoft SQL Server 2008 R2</i>
R0098	Reporting	- <i>Microsoft SQL Server 2008 Reporting Services</i>
R0099	Issue of Certificates	- <i>Active Directory Certificate Services included in the version of Microsoft Windows Server</i>
PERFORMANCE REQUIREMENTS		
Ref.	Requirement	Description
R0100	Multi-user application	- <i>The application must allow access to multiple users simultaneously without causing locking or concurrency errors. Priority will be given by queuing order.</i>
		- <i>A maximum of 100 concurrent users is estimated.</i>
USER INTERFACE REQUIREMENTS		
Ref.	Requirement	Description
R0101	Simplicity	<i>Maximum simplification of the application interface.</i>
R0102	Corporate image	<i>There is no corporate image to be applied.</i>
R0103	Language	<i>The web application will be available in ICCAT's three official languages (English, French and Spanish).</i>
R0104	Information exchange	<i>The application must allow information to be exported in PDF, csv and ASCII</i>
Authentication and security requirements		
Ref.	Requirement	Description
R0105	Restricted access and user permits	<i>Access protected by password and username. Only users or groups with permission to access the system may access the application.</i>

Table 8. Definition of User Profiles with rights and restrictions for the eBCD project.

User Profile Requirements		
Ref.	Requirement	Description
R0106	Catch manager	<i>Access to the recording of catch information (R0003)</i>
		<i>Access to the recording of transfer information (R0009)</i>
		<i>Access to the recording of transshipment information (R0011)</i>
		<i>Access to search for own BCD (R0030)</i>
		<i>Access to the editing of catch information of own BCD's (R0032) before validation</i>
		<i>Access to the editing of transfer information of own BCD's (R0032)</i>
		<i>Access to the editing of transshipment information of own BCD's (R0032) before validation</i>
		<i>Access to the printing of own BCD (R0034)</i>
R0107	Farm manager	<i>Access to the recording of farming data (R0014)</i>
		<i>Access to the editing of farming information of own BCD's (R0032) before validation</i>
		<i>Access to the recording of harvesting information (R0018)</i>
		<i>Access to search for own BCD (R0030)</i>
		<i>Access to the editing of harvesting information of own BCD's (R0032) before validation</i>
		<i>Access to the printing of own BCD (R0034)</i>
R0108	Import/export person (to be reviewed and possibly make different profiles for exporter)	<i>Access to the recording of live fish export information (R0006)</i>
		<i>Access to the recording of live fish import information (R0008)</i>
		<i>Access to the recording of dead fish export information (R0022)</i>
		<i>Access to the recording of dead fish import information (R0024)</i>
		<i>Access to search for own BCD (R0030)</i>
		<i>Access to the editing of commercial information of own BCD's (R0032) before validation (only exporter).</i>

User Profile Requirements		
Ref.	Requirement	Description
		<p><i>Access to the printing of own BCD (R0034)</i></p> <p><i>Access to the recording of re-export information (R0026)</i></p> <p><i>Access to re-exporter declaration (R0027)</i></p> <p><i>Access to importer declaration (R0028)</i></p> <p><i>Access to search for own BFTRC (R0031)</i></p> <p><i>Access to the editing of own BFTRC's (R0033) before validation (only exporter)</i></p> <p><i>Access to the printing of own BFTRC (R0035)</i></p>
R0109	CPC Validation manager	<p><i>This profile requires authentication by digital user certificate.</i></p> <p><i>Access to validation of catch information under its flag (R0004)</i></p> <p><i>Access to validation of information on live trade from its country (R0007)</i></p> <p><i>Access to validation of information on transshipment from a vessel of its flag (R0012)</i></p> <p><i>Access to validation of information on farming in farms of its jurisdiction (R0016)</i></p> <p><i>Access to validation of information on harvesting in farms of its jurisdiction (R0020)</i></p> <p><i>Access to validation of information on trade from its country (R0023)</i></p> <p><i>Access to information on trade into its country</i></p> <p><i>Access to validation of information on re-export from its country (R0029)</i></p> <p><i>Access to search for own BCD (R0030)</i></p> <p><i>Access to the editing of a BCD of its jurisdiction (R0032)</i></p> <p><i>Access to the printing of a BCD of its jurisdiction (R0034)</i></p> <p><i>Access to search for a BFTRC (R0031)</i></p> <p><i>Access to the editing of a BFTRC of its jurisdiction (R0033)</i></p> <p><i>Access to the printing of a BFTRC of its jurisdiction (R0035)</i></p>

User Profile Requirements

Ref.	Requirement	Description
R0110	CPC Administration manager Exceptions: editing importers/exporters information	<i>This profile requires authentication by digital user certificate.</i>
		<i>Access to search for a BCD (R0030)</i>
		<i>Access to the editing of a BCD of its jurisdiction (R0032)</i>
		<i>Access to the printing of a BCD of its jurisdiction (R0034)</i>
		<i>Access to search for a BFTRC (R0031)</i>
		<i>Access to the editing of a BFTRC of its jurisdiction (R0033)</i>
		<i>Access to the printing of a BFTRC of its jurisdiction (R0035)</i>
		<i>Access to the recording of information on vessels, traps, farms and ports of its jurisdiction.</i>
		<i>Access to the authorization of vessels, traps, farms and ports of its jurisdiction.</i>
		<i>Access to the editing of information on vessels, traps, farms and ports of its jurisdiction.</i>
		<i>Access to the search for vessels, traps, farms and ports of its jurisdiction.</i>
		<i>Access to the recording of JFO application</i>
		<i>Access to the search for JFO</i>
		<i>Access to the recording of information on importers/exporters</i>
		<i>Access to the authorization of importers and exporters</i>
		<i>Access to the editing of information on importers and exporters</i>
		<i>Access to the search for importers and exporters</i>
		<i>Access to data mining</i>
		<i>Access to the management of outstanding tasks</i>
		<i>Access to user authorization</i>
<i>Access to user registration (R0031)</i>		
<i>Access to the assignment of roles</i>		
<i>Access to user data editing</i>		

User Profile Requirements		
Ref.	Requirement	Description
		<i>Access to user deregistration</i>
R0111	ICCAT Regional Observer	<i>Access to the signing of farming information (R0015)</i>
		<i>Access to the signing of harvesting information (R0019)</i>
		<i>Access to search for a BCD (R0030) restricted to deployment.</i>
R0112	ICCAT Secretariat	<i>Access to search for a BCD (R0030)</i>
		<i>Access to the editing of a BCD (R0030) upon request from CPCs</i>
		<i>Access to the printing of a BCD (R0034)</i>
		<i>Access to search for a BFTRC (R0031)</i>
		<i>Access to the editing of a BFTRC (R0033) upon request from CPCs</i>
		<i>Access to the printing of a BFTRC (R0035)</i>
		<i>Access to the registration of ICCAT Regional Observers (R0036)</i>
		<i>Access to the validation of the list of vessels, traps, farms and ports</i>
		<i>Access to the search for vessels, traps, farms and ports</i>
		<i>Access to JFO authorization</i>
		<i>Access to the search for JFO</i>
		<i>Access to the search for importers and exporters</i>
		<i>Access to data mining</i>
		<i>Access to the management of outstanding tasks</i>
		<i>Access to user registration</i>
		<i>Access to the allocation of roles</i>
		<i>Access to the issue of user certificates</i>
<i>Access to the editing of user data</i>		
<i>Access to user deregistration</i>		
<i>Access to reports by CPC for funds</i>		

User Profile Requirements		
Ref.	Requirement	Description
R0113	Administrator	<i>Access to all options existing in the web with no restrictions to the data. Develop system to keep log of all actions by the Administrator account, with third party auditing control.</i>
Role Definition Requirements		
Ref.	Requirement	Description
R0114	Catch vessel master	<i>Person responsible for the vessel that catches bluefin tuna. Assigned profile: Catch manager</i>
R0115	Catch vessel representative	<i>Person representing one or more vessels that capture bluefin tuna. Assigned profile: Catch manager</i>
R0116	Trap operator	<i>Person responsible for the trap that catches bluefin tuna. Assigned profile: Catch manager</i>
R0117	Trap representative	<i>Person representing one or more traps that capture bluefin tuna. Assigned profile: Catch manager</i>
R0118	Port authority	<i>Person responsible for a port authorized to operate with bluefin tuna. Assigned profile: Catch manager</i>
R0119	Farm operator	<i>Person responsible for a bluefin tuna farm. Assigned profile: Farm manager</i>
R0120	Farm representative	<i>Person representing one or more bluefin tuna farms. Assigned profile: Farm manager</i>
R0121	Seller	<i>Person responsible for the sale of bluefin tuna in the same country or in an EU member country of capture. Assigned profile: to be assigned</i>
R0122	Seller representative	<i>Person representing one or more persons responsible for the sale of bluefin tuna in the same country or in an EU member country of capture. Assigned profile: to be assigned</i>
R0123	Buyer	<i>Person responsible for the purchase of bluefin tuna in the same country or in an EU member country of capture.</i>

User Profile Requirements		
Ref.	Requirement	Description
		<i>Assigned profile: to be assigned</i>
R0124	Exporter	<i>Person responsible for the export of bluefin tuna.</i>
		<i>Assigned profile: Import/export manager</i>
R0125	Exporter representative	<i>Person representing one or more bluefin tuna export managers.</i>
		<i>Assigned profile: Import/export manager</i>
R0126	Importer	<i>Person responsible for the import of bluefin tuna.</i>
		<i>Assigned profile: Import/export manager</i>
R0127	CPC authority	<i>Person authorized by the CPC for the validation of BCD's and BFTRC's.</i>
		<i>Assigned profile: Validation manager</i>
R0128	CPC administrator	<i>Person responsible in the CPC for the administration of all records associated with bluefin tuna.</i>
		<i>Assigned profile: CPC administration manager</i>
R0129	ICCAT administrator	<i>Staff Member of the ICCAT Secretariat authorized for the administration of all the information on the bluefin tuna.</i>
		<i>Assigned profile: ICCAT Secretariat</i>
R0130	ICCAT User	<i>Staff Member of the ICCAT Secretariat authorized to access and editing information in accordance with CPC request.</i>
		<i>Assigned profile: ICCAT Secretariat</i>
R0131	System administrator	<i>IT control of database and backup</i>
		<i>Assigned profile: Administrator</i>

Table 9. Minimum requirements for the cloud architecture provider in reference to the eBCD project.

Requirements Web Application	
Web base application;	Available through the internet web browser(s): Internet Explorer, Mozilla Firefox, Safari, Google Chrome,
Code development.	The application is implemented in Microsoft .NET and it runs an SQL-Server database. Fully compatible with ICCAT Secretariat databases
System Availability	Available 24 h x 7 d
Recovery time	2 RTO options: 1. Less than an hour 2. Between 2 and 6 hours
Data Backup policy	RPO: 6 hours (estimated but not confirmed)
Number of Concurrent users	It is supposed to have a maximum of 100 concurrent users.
Access Security Level	SSL Protocol will be used for all access to the Web application.
Authentication	3 options depending on the user group: - Client side digital certificate - User and single password - User and two passwords
Storage	It is calculated that it is going to be stored about 3500 to 5000 eBCDs per year Each entity will store the information in 10 database tables. The estimated size of the DB it is about 2GBs.
Connectivity	It is required to establish a VPN connection: The service must provide a secure access to other services allocated in the infrastructure.
Scalability	It might be necessary to enhance the current architecture in order to scale-out in order to allocate an increment of the demand of the service. Also it has to be considered that the storage used by the DB, it might increase.
Confidentially.	It is required a non-disclosure agreements (NDA) about the data stored in the DB.
Software Requirements	
Web Server	Microsoft IIS 6.0 or upper
Data Base	Microsoft SQL Server 2008 R2
Reporting	Microsoft SQL Server 2008 Reporting Services
Issue of Certificates	Certificate Service such Active Directory, included in the Microsoft Windows Server version.

Proposal Budget Distribution

<i>Main Item</i>	<i>Sub-item</i>	<i>Estimated Cost (Euros)</i>
Code/software Development	Database code	
	GUI	
	Security systems	
	Total Software development	
Infrastructure architecture	Cloud server	
	Maintenance server	
	Total Infrastructure	
User support and training	Manual and documentation	
	End User training	
	On line help function	
	12 months Post-implementation support	
	Total User support	
Test evaluations	Operability test	
	Stress test	
	Total Test evaluations	
Travel / coordination meetings	Madrid Secretariat	
	Other destinations	
	Total travel/coordination	
Others (please specified)		
	Total others	
Contingencies		
	Total Budget proposal	

eBCD Project TT



Task Name	Q2 2012			Q3 2012			Q4 2012			Q1 2013			Q2 2013			Q3 2013			Q4 2013			Q1 2014			Q2 2014		
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1 Phase 1. e-BCD Software development	Phase 1. e-BCD Software development																										
2 e-BCD database Ms-SQL 2008-R2	e-BCD database Ms-SQL 2008-R2																										
3 e-BCD link to Auxiliar DBs ICCAT	e-BCD link to Auxiliar DBs ICCAT																										
4 GUI Input form development	GUI Input form development																										
5 E-mail link connections e-BCD CPC	E-mail link connections e-BCD CPC																										
6 Certified e-digital signature setup for CPCs	Certified e-digital signature setup for CPCs																										
7 Develop Administrator manual & ref guide	Develop Administrator manual & ref guide																										
8 Register users e-BCD	Register users e-BCD																										
9 GUI user register form and password definition	GUI user register form and password definition																										
10 User Profiles: rights and restrictions development	User Profiles: rights and restrictions development																										
11 Phase 2. Online e-BCD Application and initial in-house evaluation	Phase 2. Online e-BCD Application and initial in-house evaluation																										
12 Test GUI form and DB structure	Test GUI form and DB structure																										
13 Load application on "Cloud" server	Load application on "Cloud" server																										
14 Develop User Manual & Ref guide	Develop User Manual & Ref guide																										
15 Develop data mining modules	Develop data mining modules																										
16 Aux DB input GUI development	Aux DB input GUI development																										
17 Vessel input GUI form + DB	Vessel input GUI form + DB																										
18 Farms and Traps input GUI form + DB	Farms and Traps input GUI form + DB																										
19 JFO register input + DB	JFO register input + DB																										
20 Register input Importer & Exporters	Register input Importer & Exporters																										
21 Register Authorized Ports	Register Authorized Ports																										
22 Develop User's Agendas	Develop User's Agendas																										
23 Test Multiple users access GUI	Test Multiple users access GUI																										
24 Development Security levels	Development Security levels																										
25 Phase 3. Online e-BCD Test external voluntary CPCs evaluations	Phase 3. Online e-BCD Test external voluntary CPCs evaluations																										
26 Input Auxiliary DB data	Input Auxiliary DB data																										
27 Upload Auxiliary DB GUI forms and protocols	Upload Auxiliary DB GUI forms and protocols																										
28 Track and verification voluntry e-BCD fill	Track and verification voluntry e-BCD fill																										
29 Develop Video Help file for e-BCD and training course	Develop Video Help file for e-BCD and training course																										
30 Phase 4. Stress and Vulnerability test	Phase 4. Stress and Vulnerability test																										
31 Internal test: Multiple operations/users	Internal test: Multiple operations/users																										
32 Test user rights robtuness	Test user rights robtuness																										
33 Report to Commission of initial project deployment	Report to Commission of initial project deployment																										
34 Updates and Modifications e-BCD project	Updates and Modifications e-BCD project																										
35 Phase 5. Final deployment and Monitoring	Phase 5. Final deployment and Monitoring																										
36 Final Code verifications and reference	Final Code verifications and reference																										
37 Setup User Support System and test	Setup User Support System and test																										
38 Final report and e-BCD manual, reference and code transfer	Final report and e-BCD manual, reference and code transfer																										
39 Annual User Support	Annual User Support																										
40 Start User and administration technical support	Start User and administration technical support																										