Question	Answer
1. Target Specifications	**X** Scientific target **X** Nature Conservation target Others …………………..
1.1. Alternatives of Scientific target	**X** Institutional policy Applications ……………….
1.2. Alternatives of Nature Conservation	**X** Call for Inventory by Local Authorities **X** Call for Inventory by Government **In Germany these two do not differ from each other so much** …………………………………
1.3. Other alternatives	Action Plans financed by private sectors …………………………………

2. Components of Target Specification	BIOTA-ATBI
	  Zoollogy / Faunistics
	X Botany **/** Floristics
	  Paleobiology
	  Petrology/Soil
	  Anthropology
	…………………..

3. Types of Labour	**X** Involving other partners, as NGO's **X** Involving inner colleagues **X** Involving outer colleagues **X Government institution**
4. Topic of activity:	**X** Inventory **X** Monitoring …………………...
5. Steps of Inventory work	**X** 1. Inventory Management **X** 2. Field Work 3. Labour Work **X** 4. Reporting **X** 5. Data Management …………………..
6. External factors of Inventory Management	Weather forecast **X** Vegetation season **X** Aspect of species **X** Labour capacity **X** Budget …………………

7. Inventory Management	**X** 1. Determining Groups, Localities and Methods
	X 2. Fundraising
	X 3. Calculating travel expenses
	X 4. Obtaining permission for collection by groups
	X 5. Setting up database structure and software
	  6. Testing collecting methods
	X 7. Setting up research team
	X 8. Managing the travel
	  9. Hiring local assistant workers

	10. Establishing shipping-room 11. Compiling sample design plan by groups 12. Compiling progress chart by groups **X** 13.Optimizing collecting activity by financial and human background **X** 14. Managing the transportation of collected materials 15. Informing the public ……………………………..
7.1.Determining of Groups, Localities and Methods	**X** YES NO ………………
7.1.1. Sub-activities of Determination of Groups, Localities and Methods	**X** Setting up groups Setting up collecting methods **X** Setting up localities Setting up Gazetteer database ………………………
7.1.2. Output of Setting up collecting methods	**X** Presence / Absence data **X** Type of collecting methods **Herbarium collection** Quantitative collection ……………………
7.1.3. Step of activities of setting up Gazetteer Database	1. Collecting Resources from literature 2. Checking up current situation on field 3. Reviewing Gazetteer ………………………
7.2.Fundraising	**X** YES NO ………………
7.3.Calculating travel expenses	**X** YES NO ………………
7.4.Obtaining permission for collection by groups	**X** YES NO ………………
7.4.1. Types of permissions	Permission for collecting on a protected locality Permission for collecting on a somehow special locality Permission for collecting protected, overprotected species Permission for collecting somehow special species **X General collecting permits**
7.4.2. Target of applying for a permission	**X** YES NO ………………
7.4.3. Result of Obtaining a Permission	**X** YES NO ………………
7.5.Setting up database	**X YES softvare: SPECIFY**

structure and software	NO …………………..
7.6.Testing collecting methods	YES **X** NO …………………
7.6.1. Input of Testing collecting methods	YES **X** NO …………………
7.6.2. Output of Testing collecting methods	Species number and turnover estimators. …………………………
7.7.Setting up research team	**X** YES NO …………………
7.7.1. Sub-activities of Setting up research tem	**X** Establishing the List of Specialists Establishing and clarifying the authorships: **with volunteers does not matter** Setting up Copyright notice: **with volunteers does not matter** **X** Dividing Labour, Cooperation …………………………..
7.8. Managing the travel	**X** YES NO …………………
7.8.1. Sub-activities of Managing the travel	**X** Optimising institutional facilities (car, equipment, etc.) **X** Organizing packing and transportation of collecting equipments **X** Renting a car / canoe **X** Booking accommodation **X** Procuring maps, information about the localities …………………………
7.9. Hiring local assistant workers	YES **X** NO …………………
7.10. Establishing shipping-room	YES **X** NO …………………
7.11. Compiling sample design plan by groups	YES **X** NO ………………
7.11.1. Sub-activities of Compiling sample design plan by groups	They visit a concrete locality (known from own experience or from literature) They visit a type of locality (lake, hill, etc.), but the exact site will be decided on field. ………………………………….
7.12. Compiling progress chart by groups	**X** YES NO …………………
7.13. Optimising collecting activity by	**X** YES NO

financial and human background	…………………
7.14. Managing the transportation of collected materials	YES NO **X own transportation (he transports the specimens in his own car)**
7.14.1. Sub-activities of Managing the transportation of collected materials	Obtaining packing materials **X** Obtaining special permission for importing and exporting by groups Estimating the storage capacity ………………………………….
7.15. Informing the public	**X** YES NO …………………
8. Field Work	**X** YES NO ………………
8.1.Sub-activities of Field Work	**X** 1. Describing and Identifying the locality using standardized methods **X** 2. Setting up collecting equipments **X** 3. Collecting of specimens (depends on collecting methods) **X** 4. Repeating based on protocol **X** 5. Examining preliminary the samples 6. Releasing the specimens **X** 7. Preparing preliminary the samples **X** 8. Ending collection activity …………………………….
8.2. Describing and Identifying the locality using standardized methods	**X** YES NO …………………
8.2.1. Sub-activities of Describing and Identifying the locality using standardized methods	Acquisition of GIS data / Georeferencing **X GPS**
8.2.2. Acquisition of GIS data	Receiving single signal Receiving iterated signal Synchronizing with best satellite position using database Using differential measurement with standard coordinates ………………………
8.3. Setting up collecting equipments	**X** YES NO …………………………..
8.4. Collecting of specimens (depends on collecting methods)	**X** YES NO …………..…………
8.5. Repeating based on	**X** YES

protocol	NO …………………
8.6. Examining the samples	**X** YES NO …………………
8.7. Releasing the specimens	YES **X** NO …………………
8.8. Preparing preliminary the samples	Narcotising and/or Cleaning Sorting Preserving Pre-labelling Packing **X Pressing and drying**………..
8.9. Ending collection activity	**X** YES NO ………………
8.9.1. Sub-activities of Ending collection activity	Cleaning or eradicating and packing the collecting equipments **X** Archiving collecting data **X Archiving the specimens**……….
9. Labour Work	**X** YES NO ………………
9.1.Steps of Labour Work **They mean under lab work:** **genetic analysis which is done** **by someone else in Arno** **Wörz's case**.	**X** 1. Sorting **X** 2. Labelling **X** 3. Examining **X** 4. Sending to specialist **X** 5. Identifying **X** 6. Preserving **X** 7. Putting specimens into collection 8. Providing the storage of voucher specimens ……………………………………..

9.1.1. Identifying	**X** Immediate identification
	X New species
	    ▪ **X** Finding specimen in host institute
	    ▪ **X** Searching in literature
	    ▪ Asking for holotype
	    ▪ **X** Contacting to a specialist
	……………………

10. Reporting	**X** YES NO …………………
10.1. Sub-activities of Reporting	**X** Taking analogue or digital photos: **He takes** **pictures only on field, thus it should be** **mentioned in connection of field work.** Recording video **X** Registering data electronically or manually **X** Writing reports, checklist, when a task has been finished

	X Putting the data in the inventory book and into the database of the collection …………………………….

Remarks: 1. In case of "Steps…." of some activity, a time determined order is necessary. This order is often determined by a dataflow relationship (the result of one step is the input of another step)

2. In case of Sub-activities…" of some activity however, the relationship is "subset-set" like, that is the sub-activities are only grouped together, and there is no time relationship among them.

3. In case of compound activities their input and output is not explicitly mentioned. The input of a compound activity is the difference of all inputs of its steps, minus the outputs of its steps. The result of a compound activity is a subset of the result of its steps.

4. Where there are numbers in front of the activities, the order of the activities is important. In case the researcher adds a new activity, he should follow the order of the activities, sign his new activity according to its place in the order and note his disagreements.

Name: Arno Wörz   Profession: biologist
Title: Dr.   Institute: Staatliches Museum für Naturkunde Stuttgart
Address: Rosenstein1, 70191 Stuttgart

Remarks:
He deals with classic taxonomy and floristic mapping (inventory) too.
He does the mapping on an area of South-east Germany. This area was mapped already 10 years ago, but they remap it now.