



**Environmental/social performance  
indicators (ESPIs) and sustainability  
markers in minerals development:  
reporting progress towards improved  
health and human well-being: Phase II**

**Annexure volume**

*Submitted to*

**International Development Research Centre (IDRC)  
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# **ANNEXURE I**

## **Indicator sheets**

**Mine company (company and mine site)**

**Government**

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| TERI<br>Indicator testing sheet                               |   |   |                     |                            |  |  |
|---|---|---|---------------------|----------------------------|--|--|
| Company level   |   |   |                     |                            |  |  |
| Name of company   |   |   |                     |                            |  |  |
| No. of working leases   |   |   |                     |                            |  |  |
| Area of lease/s (ha)  |   |   |                     |                            |  |  |
| No. of employees incl. at H.O.                                |   |   |                     |                            |  |  |
| Total ore produced in reporting year (in mn. tonnes)          |   |   |                     |                            |  |  |
| Gross earnings Rs/annum                                       |   |   |                     |                            |  |  |
| Date of reporting:  |   |   |                     |                            |  |  |
| Reporting period ( please specify year to which info applies) |   |   |                     |                            |  |  |
| Issues  | Indicators  | Relevance to good practice, corporate social responsibility /sustainable development objectives | Unit of measurement | Actual data (to be filled) | Comments Is the indicator useful? Yes/No | If data do not exist can they be collected? Yes/No |
| Worker  | Amount spent on training or related costs   | Indicates investment in human capital   | Rs/annum            |                            |  |  |
|   | Average wage paid - skilled   | Indicates CSR   | Rs/annum/worker     |                            |  |  |
|   | Average wage paid - semi-skilled  | Indicates CSR   | Rs/annum/worker     |                            |  |  |
|   | Change in real average employee wage (VDA)  | Improvement in financial welfare of workers   | % change /annum     |                            |  |  |
|   | System for productivity linked pay increments                                       | Attention to worker incentives  | Yes/No              |                            |  |  |
|   | Health benefits provided to employees   | Indicates commitment to ensuring employee welfare   | Rs/annum            |                            |  |  |
|   | Health benefits extended to families of the employee                                | Indicates commitment to ensuring employee welfare   | Yes/No              |                            |  |  |
|   | Comprehensive health insurance  | Indicates commitment to ensuring employee welfare   | Yes/No              |                            |  |  |
| Worker related concerns                                       | No of worker related problems   | Indicates quality of management practices   | No.                 |                            |  |  |
|   | Role of staff in decision making  | Indicates quality of management practices   | Specify             |                            |  |  |
|   | Employment welfare schemes  | Indicates managements concern for employees   | Specify             |                            |  |  |
|   | Attention to occupational stress related disorders (counselling, other)             | Indicates commitment to labour welfare  | Specify type        |                            |  |  |
|   | Investment in injury prevention   | Indicates corporate social responsibility (CSR)   | Rs/annum            |                            |  |  |
|   | A full fledged health clinic with a regular doctor                                  | Indicates CSR   | Yes/No              |                            |  |  |
|   | ESI/welfare cess provided to employees  | Indicates compliance  | Rs/annum            |                            |  |  |
|   | Frequency and type of discrimination-related litigious action taken against company | Indicates performance of companies as it relates to equal opportunities                         | No/annum            |                            |  |  |
|   | Number and types of legal actions concerning anti-union practices                   | Indicator of corporate reputation and community relations                                       | No/annum            |                            |  |  |
|   | "Local Hiring & Training" in employment policy                                      | Indicates a commitment to local community development   | Yes/No              |                            |  |  |
|   | Proportion of employees leaving employment before completion of contracted period   | Indicates worker dissatisfaction or better prospects elsewhere                                  | Workers/annum       |                            |  |  |
|   | Refusal rate for job offers   | Indicates problems with reputation?   | No./annum           |                            |  |  |
|   | Worker participation in management  | Indicates decentralisation  | Provide e.g.        |                            |  |  |
|   | Programmes to foster worker improvement (HRD programmes)                            | Investment in HC  | No/annum            |                            |  |  |
|   | Phased rehabilitation of retired workers  | Indicates CSR   | Yes/No              |                            |  |  |
|   | Investment per worker in illness and injury prevention                              | Indicates CSR   | Rs/annum            |                            |  |  |
|   | Counseling to workers affected by alcoholism or stress disorders                    | Indicates CSR   | Yes/No              |                            |  |  |
|   | Staff grievance procedures in place   | A mechanism to ensure worker grievances are heard by management                                 | Yes/No              |                            |  |  |

| Issues  | Indicators  | Relevance to good practice, corporate social responsibility / sustainable development objectives         | Unit of measurement | Responses (to be filled) | Comments Is the indicator useful? Yes/No | If data do not exist can they be collected? Yes/No |
|---|---|--|---------------------|--------------------------|--|--|
| Quality of management   | Are tax/royalty amounts reported in company reports?  | Makes available to public the extent of mineral wealth distribution between State and Co.                | Yes/No              |                          |  |  |
|   | Proportion of women holding executive, senior and middle management positions   | Indicates commitment to gender equality  | No                  |                          |  |  |
| Capability to innovate  | Level of R & D spending   | Indicates investment in developing innovativeness  | Rs/annum            |                          |  |  |
|   | Number of R&D personnel   | Indicates investment in developing innovativeness  | No/annum            |                          |  |  |
| Market shares   | Traditional markets   | Indicates buyer commitments  | % of exports        |                          |  |  |
|   | Emerging markets ( last 10 yrs)   | Indicates diversification/lost markets   | % of exports        |                          |  |  |
| Quality control   | Is your company an ISO 9000 company?  | Indicates effort to become world class   | Yes/No              |                          |  |  |
| Environmental management policy                                     | Environmental protection expenditures   | This indicates efforts by companies to protect environment   | Rs./annum           |                          |  |  |
|   | Do you have an EIA and SA for your projects   | Indicates efforts at baseline assessments  | Yes/No              |                          |  |  |
|   | Is your company a ISO 14000 company or aspiring to be one? Any other standard?  | Indicates effort to become world class Co.   | Yes/No              |                          |  |  |
|   | Comply to national and local regulations  | Indicates compliance   | Yes/No              |                          |  |  |
|   | Supply information on request related to environmental performance and management   | Indicates transparency   | Yes/No              |                          |  |  |
|   | Arrange open days/ visits for the purpose of explaining environmental management at the site to members of the community                                | Indicates desire for good community relations and a good reputation                                      | Yes/No              |                          |  |  |
|   | Proactively disseminate information regarding environmental performance to the public   | Indicates desire for good community relations and a good reputation                                      | Yes/No              |                          |  |  |
|   | Seek to educate the public about the environmental impact of mining and the remedial and preventative methods used by the company through various for a | Indicates transparency & desire for good social relations  | Yes/No              |                          |  |  |
|   | Employ local people to assist the company in the prevention and remediation of environmental impacts at your project                                    | Indicates an understanding of the importance of local knowledge & investment in good community relations | No.                 |                          |  |  |
| Closure issues (relevant to companies where mines are closing down) | Financial support for job search and relocation   | Indicates CSR  | Rs/ annum           |                          |  |  |
|   | Abandoned mine dump management  | Indicates environmental responsibility   | Rs/ annum           |                          |  |  |
|   | Plan for mine closure: environmental  | Indicates environmental responsibility   | Yes/No              |                          |  |  |
|   | Plan for mine closure: social rehabilitation  | Indicates CSR  | Yes/No              |                          |  |  |
|   | Compensation packages for workers   | Indicates CSR  | Yes/No              |                          |  |  |
|   | Plan for mine pit rehabilitation?   | Indicates environmental responsibility   | Yes/No              |                          |  |  |

| Issues   | Indicators   | Relevance to good practice, corporate social responsibility /sustainable development objectives                 | Unit of measurement                 | Responses (to be filled) | Comments Is the indicator useful? Yes/No | If data do not exist can they be collected? Yes/No |
|--|--|---|-------------------------------------|--------------------------|--|--|
| Investment in the mining region: Human /physical | Investment in mine roads   | Indicates CSR   | Rs/annum                            |                          |  |  |
|  | Investments in schools/training facilities   | Indicates CSR   | Rs/annum                            |                          |  |  |
|  | Investment in toilets/sanitation facilities  | Indicates CSR   | Rs/annum                            |                          |  |  |
|  | Percentage of corporate social investment budget to annual profit of company                             | Indicates commitment to social investments  | %                                   |                          |  |  |
|  | Do you fund an occupational training centre?   | Indicates commitment to social investments  | Yes/No                              |                          |  |  |
|  | Investment in community hospitals  | Indicates CSR   | Rs/ annum                           |                          |  |  |
|  | Investment in playgrounds/clubs/parks  | Indicates CSR   | Rs/ annum                           |                          |  |  |
|  | Are you a member of the Minerals Foundation for Goa?   | Indicates CSR   | Yes/No                              |                          |  |  |
| Social & community relations                     | Does your company have a community relations officer/team  | Indicates a concern for ongoing attention to community concerns   | Yes/no                              |                          |  |  |
|  |  |   |                                     |                          |  |  |
|  | Practice of community affairs officer reporting directly to the senior community affairs manager &/or GM | Indicates priority of community concerns in internal decision-making  | Yes/no                              |                          |  |  |
|  | Incidences of conflict between company personnel and community members at large                          | Indicates a dissatisfaction with mine operations  | No/annum                            |                          |  |  |
|  | Involvement in local affairs   | Indicates investment in community   | No. of awards/ scholarships given/a |                          |  |  |
|  | Do you have any management staff drawn from local communities  | The indicator aims to raise awareness of the possibility of local people being promoted to managerial positions | Yes/No                              |                          |  |  |
|  | No. of litigious action against company  | Indicates corporate reputation  | No/annum                            |                          |  |  |
| Land access negotiation                          | Corporate policy/mission statement demonstrating a commitment to community engagement & relations        | Indicates that the head office is putting its weight behind a strategic direction                               | Yes/No                              |                          |  |  |
|  | A legalist approach or a post sale livelihood approach   | Indicates concern with long term community relations  | Legalist or livelihood?             |                          |  |  |
| Participation                                    | Existence of prior community consultation  | Indicates consultation with stakeholders  | Yes/No                              |                          |  |  |
|  | Representation of local communities in decision-making   | Indicates community consultation  | Yes/No                              |                          |  |  |
|  | Does your company provide community access to information  | Indicates transparency  | Yes/No                              |                          |  |  |
|  | Research into community perception of the project  | Indicates community engagement  | Yes/no                              |                          |  |  |
| Effective governance                             | Time spent to get approvals under various Acts:  | Indicates quality of service delivery   | No. of months                       |                          |  |  |
|  | Bureaucratic delays  | Indicates quality service delivery  | No. of days /file clearance         |                          |  |  |
|  | Time spent with bureaucrats  | Indicates time away from core activity  | No. of days/month                   |                          |  |  |
|  | Need for 'incentives' to get things done   | Indicates additional costs to company   | No. of times                        |                          |  |  |
|  | Citizens, businesses can file law suits against government   | Indicates rights of citizens  | Yes/No                              |                          |  |  |
|  | Govt attentive to problems of company  | Indicates quick problem resolution  | Yes/No                              |                          |  |  |

This indicator sheet is being prepared for the use of the mining industry. Do you have any suggestions for its improvements?  
Your cooperation and assistance is greatly appreciated.

| <div>TERI</div> <div>Indicator testing sheet</div> <div>Mine Level</div> |  |  |                         |                   |                                    |   |
|--|--|--|-------------------------|-------------------|------------------------------------|---|
| Name of company  |  |  |                         |                   |                                    |   |
| Name of mine project   |  |  |                         |                   |                                    |   |
| Lease No.  |  |  |                         |                   |                                    |   |
| Area of lease/s (ha)   |  |  |                         |                   |                                    |   |
| No. of workers relating to mine project                                  |  |  |                         |                   |                                    |   |
| Amount of ore produced from this project                                 |  |  |                         |                   |                                    |   |
| Which year was this mine opened?   |  |  |                         |                   |                                    |   |
| Date of reporting:   |  |  |                         |                   |                                    |   |
| Reporting period (please specify year to which info applies)             |  |  |                         |                   |                                    |   |
| Issues   | Indicators   | Relevance to good practice, corporate social responsibility/sustainable development objectives | Unit of measurement     | Data to be filled | Comments                           |   |
|  |  |  |                         |                   | Is the indicator useful?<br>Yes/No | If data do not exist can they be collected?<br>Yes/No |
| Life of mine   | Estimated R/P ratio of mine                              | It serves as a basis for estimating future iron ore supplies                                   | In years                |                   |                                    |   |
|  |  | enabling proactive decision making to ensure   |                         |                   |                                    |   |
|  |  | the efficient use of these resources over the longer term.                                     |                         |                   |                                    |   |
| Working conditions   | No. of fatal accidents                                   | An indication of changes in safety within the mine site  | No/yr                   |                   |                                    |   |
|  | No. of serious accidents                                 | An indication of changes in safety within the mine site  | No/yr                   |                   |                                    |   |
|  | No. of minor accidents                                   | An indication of changes in safety within the mine site  | No/yr                   |                   |                                    |   |
| Ore quality  | Min-max Fe grades  | An indication of the amount of upgradation required  | % Fe                    |                   |                                    |   |
|  | Type of grade (lumpy etc)                                | An indication of beneficiation/processing required (time & money)                              | Tonnes/annum            |                   |                                    |   |
|  | Import high grade ore for upgrade                        | An indication of the additional costs  | Tonnes/annum            |                   |                                    |   |
|  | Technological upgradation of low grade to high grade ore | An indication of increased competitiveness through technological efficiency                    | % of ore produced/annum |                   |                                    |   |

| Issues           | Indicators   | Relevance to good practice, corporate social responsibility/sustainable development objectives  | Unit of measurement    | Data to be filled | Comments                           |   |
|------------------|--|---|------------------------|-------------------|------------------------------------|---|
|                  |  |   |                        |                   | Is the indicator useful?<br>Yes/No | If data do not exist can they be collected?<br>Yes/No |
| Land for dumping | Existing area occupied by dumps                                    | An indication of the degree of land squeeze generated by dumps  | Ha                     |                   |                                    |   |
|                  | Additional barren land required for dumping                        | Indicates extent of land required as against actual available   | Ha                     |                   |                                    |   |
|                  | Dump management such as terracing, contour, bunding, trenches, etc | An indicator of better environmental performance  | Ha                     |                   |                                    |   |
|                  | Dumps on forested land   | Indicates poor practice   | Ha                     |                   |                                    |   |
|                  | Barren land used for dumping                                       | An indicator of better environmental performance  | Ha                     |                   |                                    |   |
|                  | Land reclaimed in dump area  | An indicator of better environmental performance  | Ha                     |                   |                                    |   |
|                  | Land reclaimed in excavated area                                   | An indicator of better environmental performance  | Ha                     |                   |                                    |   |
|                  | Land reclaimed in other areas (green belts etc.)                   | An indicator of better environmental performance  | Ha                     |                   |                                    |   |
|                  | Agricultural land converted for dumps                              | An indication of the potential loss to agriculture  | Ha                     |                   |                                    |   |
|                  | Vegetation undertaken on dumps                                     | An indication of improved environmental performance   | Ha under vegetation    |                   |                                    |   |
| NGO/PIL pressure | Amount of time spent on litigation/court cases                     | An indication of lost management time;  | Days/year              |                   |                                    |   |
|                  | No. of court cases involved in                                     | Same as above   | No/annum               |                   |                                    |   |
|                  | Expenditure on litigation  | Same as above   | Rs/annum               |                   |                                    |   |
| Expenditure      | Traditional (material, manpower, capital) expenditure              | An indication of the changing nature of cost composition  | % of operational costs |                   |                                    |   |
|                  | Environmental expenditure  | An indication of the changing nature of cost composition  | % of operational costs |                   |                                    |   |
|                  | Social expenditure   | An indication of the changing nature of cost composition  | % of operational costs |                   |                                    |   |
| Water            | Waste water treated  | This indicator assesses the potential level of pollution from mine project point sources entering the aquatic environment, and monitors progress towards reducing this potential. It is an indication of the potential reduction in fresh water use | % of ww generated      |                   |                                    |   |
|                  | Tailings water recycled  | An indicator of the amount of fresh water saved through recycling   | % tw                   |                   |                                    |   |
|                  | Is there a payment of water cess?                                  | An incentive for recycling  | Yes/No                 |                   |                                    |   |
|                  | Is the mine working below water table?                             | Indicates constraints to operations   | Yes/No                 |                   |                                    |   |
|                  | Beneficiation plant for effluent treated                           | Improved resource recovery  | Yes/No                 |                   |                                    |   |
|                  | Expenditure on water quality improvement                           | This indicates efforts by companies to clean up and restore water quality   | Rs/annum               |                   |                                    |   |
|                  | Ground water pumped  | Indicates joint production of water with ore  | m <sup>3</sup> /t      |                   |                                    |   |
|                  | Surface water used   | The purpose of this indicator is to show the degree to which available water resources are being used to meet the sector's water demands  | m <sup>3</sup> /t      |                   |                                    |   |



| Issues       | Indicators   | Relevance to good practice, corporate social responsibility/sustainable development objectives   | Unit of measurement      | Data to be filled | Comments                           |   |
|--------------|--|--|--------------------------|-------------------|------------------------------------|---|
|              |  |  |                          |                   | Is the indicator useful?<br>Yes/No | If data do not exist can they be collected?<br>Yes/No |
| Water        | Are you monitoring the water quality in nearby water body              | It indicates environmental concern   | Yes/No                   |                   |                                    |   |
|              | If yes, pl. provide: Water quality in waterbody, TSS                   |  | mgm/l                    |                   |                                    |   |
|              | Water quality, BOD   |  | (mg/l)                   |                   |                                    |   |
|              | Water quality, PH  |  |                          |                   |                                    |   |
|              | Metal concentration in sediment, Pb                                    |  | µ gm/gm                  |                   |                                    |   |
|              | Metal concentration in sediment, Cd                                    |  | µ gm/gm                  |                   |                                    |   |
|              | Metal concentration in sediment Hg                                     |  | ngm/gm                   |                   |                                    |   |
|              | Use of pumped out water  | Indication of environmental concern and action   | Yes/No                   |                   |                                    |   |
|              | Pit water supplied for agricultural use after filtration               | It indicates that water is being recycled and to that extent water is saved  | Yes/No                   |                   |                                    |   |
|              | Pit water supplied after treatment for drinking purposes               | It indicates that water is being recycled and to that extent water is saved  | Yes/No                   |                   |                                    |   |
|              | Water utilisation from abandoned pits                                  | It indicates a concern to convert a liability into an asset  | Yes/No                   |                   |                                    |   |
| Air          | Avg. amount of ore per truck leaving your mine site on a typical day   | Potential for generation of fugitive dust  | Tonnes/truck             |                   |                                    |   |
|              | Expenditure on air pollution abatement (green belt, watering of roads) | This indicates efforts by companies to clean up and restore air quality  | Rs/annum                 |                   |                                    |   |
|              | TP management practices adopted  | Preventive measure   | Specify                  |                   |                                    |   |
|              | No of pits selected for backfilling or backfilled                      | Assess the potential for reducing overburden dumps and consequences thereof, if sites are selected with care not to affect groundwater | Number                   |                   |                                    |   |
|              | Are you monitoring air quality in the mine?                            | Indicates environmental concern  | Yes/No                   |                   |                                    |   |
|              | If yes, pl. provide air quality SPM levels                             |  |                          |                   |                                    |   |
| Biodiversity | Total number of exotic species introduced in mine lease area           | Lack of knowledge or biodiversity concern  | Number                   |                   |                                    |   |
|              | Relative abundance of exotic species within mine lease area            | Lack of knowledge or biodiversity concern  | ( % of particular group) |                   |                                    |   |
|              | Area of restored or secondary forest                                   | Indication of better biodiversity practice   | Ha                       |                   |                                    |   |
|              | Number of indigenous species used for revegetation                     | Indicates biodiversity concern   |                          |                   |                                    |   |
|              | Area of man made forests /plantations                                  |  | Ha                       |                   |                                    |   |
|              | Annual land use change in mine lease                                   |  | Ha                       |                   |                                    |   |
|              | Amount spent on Post mining land reclamation                           | Expenditures provide a general indication of a company's efforts directed towards rehabilitating mined out areas.                      | Rs. /annum               |                   |                                    |   |

Mine Site: \_\_\_\_\_

| Issues                       | Indicators  | Relevance to good practice, corporate social responsibility/sustainable development objectives | Unit of measurement           | Data to be filled | Comments                           |   |
|------------------------------|---|--|-------------------------------|-------------------|------------------------------------|---|
|                              |   |  |                               |                   | Is the indicator useful?<br>Yes/No | If data do not exist can they be collected?<br>Yes/No |
| Health                       | Alcohol related absenteeism                                 | A possible indicator of lost productivity to company   | Days/year                     |                   |                                    |   |
|                              | Health facility provided at mine site                       | Indication of concern to mine workers health   | Yes /No                       |                   |                                    |   |
|                              | No of times workers use health facilities within mine       | Indication of health status of mine workers or concern of mine companies                       | No of workers/ annum or month |                   |                                    |   |
|                              | Medical expenses covered                                    | Indicates CSR  | Rs/yr                         |                   |                                    |   |
|                              | Attention to respiratory disorders                          | Indicates CSR  | Specify type                  |                   |                                    |   |
|                              | Types of injury at mine site                                | Helps develop mine safety programmes   | Specify                       |                   |                                    |   |
| Land: issues of compensation | Number of compensation payments made per year               | A proxy Indicator of Impacts on agriculture and compensations made                             | Nos                           |                   |                                    |   |
|                              | Amount of compensation paid to farmers                      | An indicator of actual compensations made for impacts caused                                   | Rs/ annum                     |                   |                                    |   |
|                              | Instances of disaffection relating to compensation payments | An indicator that perhaps compensations are not perceived adequately                           | No/ annum                     |                   |                                    |   |

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# Community health and well-being

Village level

TERI

Indicator testing sheet

|                           |  |   |                               |        |               |          |           |              |                |
|---------------------------|--|---|-------------------------------|--------|---------------|----------|-----------|--------------|----------------|
| Name of person:           |  |   |                               |        |               |          |           |              |                |
| Designation:              |  |   |                               |        |               |          |           |              |                |
| Population of village:    |  |   |                               |        |               |          |           |              |                |
| No. of operating mines    |  |   |                               |        |               |          |           |              |                |
| No. of abandoned mines    |  |   |                               |        |               |          |           |              |                |
| No. of mines closing down |  |   |                               |        |               |          |           |              |                |
| Date of reporting:        |  |   |                               |        |               |          |           |              |                |
| Issues                    | Indicators                                 | Relevance to  | Unit of                       | To be  | Comments      | Do you   | If you do | Are you the  | If data do not |
|                           |  | environmental & social  | measure-                      | filled | Is the indi-  | collect  | collect   | authority to | exist can they |
|                           |  | sustainability objectives   | ment                          |        | cator useful? | the data | in what   | collect the  | be collected?  |
|                           |  |   |                               |        | Yes/No        | Yes/No   | form      | data Yes/No  | Yes/No         |
| ENVIRONMENTAL QUALITY     |  |   |                               |        |               |          |           |              |                |
| Water quality             | Monitoring level of of groundwater wells   | Avoid water shortage  | Frequency of sampling/month   |        |               |          |           |              |                |
|                           | Change in ground water recharging area     | Anticipatory action   | %of postulated baseline       |        |               |          |           |              |                |
|                           | Surface water monitoring                   | Ensure quality water to community   | Frequency of sampling/month   |        |               |          |           |              |                |
|                           | Water pH (surface & groundwater)           | Indicates level of water contamination                                      | pH units                      |        |               |          |           |              |                |
|                           | Water BOD (surface & groundwater)          | To assess the quality of water available to consumers                       | mg/l                          |        |               |          |           |              |                |
|                           | Water TDS (surface & groundwater)          | To assess the quality of water available to consumers                       | mg/l                          |        |               |          |           |              |                |
|                           | Water coliform (surface & groundwater)     | It identifies faecal contamination of water                                 | No.of coliforms/ml            |        |               |          |           |              |                |
|                           | Water turbidity (surface & groundwater)    | To assess the quality of water available to consumers                       | mg/l                          |        |               |          |           |              |                |
|                           | Wells dry up during summer                 | Indicates local aquifers are overused                                       | % of wells in village         |        |               |          |           |              |                |
|                           | Silting of water bodies                    | Indicates reduced water retention capacity; flooding hazard                 | Stretch in km                 |        |               |          |           |              |                |
|                           | Dependence on tankers                      | Indicator of potential contaminated water or shortage of water.             | No.of hhs served by tankers/d |        |               |          |           |              |                |
|                           | Shortage of water for domestic consumption | It helps to identify communities where these basic requirements are not met | lcpd<150lcpd                  |        |               |          |           |              |                |
| Air                       | Frequency of truck movements               | Fugitive ore dust is generated  | No./day/road                  |        |               |          |           |              |                |
|                           | SPM levels                                 | Possible threats to health from exposure                                    | ug/m3                         |        |               |          |           |              |                |
|                           | Enforcement of air quality standards       |   | No.of exceedances/yr          |        |               |          |           |              |                |
|                           | AQ Monitoring                              | To measure the exposure levels  | Measurements/yr               |        |               |          |           |              |                |

| Issues | Indicators   | Relevance to environmental & social sustainability objectives | Unit of measurement      | To be filled | Comments Is the indicator useful? Yes/No | Do you collect the data Yes/No | If you do collect In what form | Are you the authority to collect the data Yes/No | If data do not exist can they be collected? Yes/No |
|--------|--|---|--------------------------|--------------|--|--------------------------------|--------------------------------|--|--|
| Land   | % area of primary forest or reserved forest                                |   |                          |              |  |                                |                                |  |  |
|        | % area of degraded forest  |   |                          |              |  |                                |                                |  |  |
|        | % area under managed forest  |   |                          |              |  |                                |                                |  |  |
|        | Land use plan for mining areas   | Indicates careful planning from the outset                    |                          |              |  |                                |                                |  |  |
|        | Compositional changes in vegetation cover e.g. mono-cultural plantations   |   | % of postulated baseline |              |  |                                |                                |  |  |
|        | Awareness of the community about the importance of afforestation           |   |                          |              |  |                                |                                |  |  |
|        | Soil monitoring  |   | Analysis/yr              |              |  |                                |                                |  |  |
|        | Existence of uncultivated land   | Indicates agricultural land is affected                       | % of baseline            |              |  |                                |                                |  |  |
|        | New areas brought under mining   | Extent available for other uses                               | % of baseline            |              |  |                                |                                |  |  |
|        | Increase in degraded land  | Poor env. performance   | % of baseline            |              |  |                                |                                |  |  |
|        | Gain/decline in agri output per unit area or input                         | Impacts on farmers  | % of baseline            |              |  |                                |                                |  |  |
|        | Number of land slides/   | Potential flooding hazards                                    | No./yr                   |              |  |                                |                                |  |  |
|        | Changes in soil nutrient status  |   |                          |              |  |                                |                                |  |  |
|        | Changes in organic matter in soil  |   |                          |              |  |                                |                                |  |  |
|        | Siltation of agricultural land and   |   | Area under silt          |              |  |                                |                                |  |  |
|        | Increase in soil erosion   |   |                          |              |  |                                |                                |  |  |
|        | Expansion of area under colonies for mine workers, offices, workshops etc. |   | Ha                       |              |  |                                |                                |  |  |
|        | Cattle population  |   | No./c                    |              |  |                                |                                |  |  |
|        | Cattle on roads  | Indication of loss of grazing ground for cattle               | No./km stretch           |              |  |                                |                                |  |  |
|        | Tree planting  |   | % of village/yr          |              |  |                                |                                |  |  |
|        | Change in forest cover   |   | % of forest cover        |              |  |                                |                                |  |  |

| Issues           | Indicators  | Relevance to environmental & social sustainability objectives                                    | Unit of measurement      | To be filled | Comments<br>Is the indicator useful?<br>Yes/No | Do you collect the data<br>Yes/No | If you do collect in what form | Are you the authority to collect the data<br>Yes/No | If data do not exist can they be collected?<br>Yes/No |
|------------------|---|--|--------------------------|--------------|--|-----------------------------------|--------------------------------|---|---|
| Land for dumping | Existing area occupied by dumps   | An indication of the degree of land squeeze generated by dumps                                   | Ha                       |              |  |                                   |                                |   |   |
|                  | Forest land used for dumping  | Indicates land cover change  | Ha                       |              |  |                                   |                                |   |   |
|                  | Barren land used for dumping  | An Indicator of better environmental performance   | Ha                       |              |  |                                   |                                |   |   |
|                  | Land reclaimed in dump area   | An Indicator of better environmental performance   | Ha                       |              |  |                                   |                                |   |   |
|                  | Land reclaimed in excavated area  | An Indicator of better environmental performance   | Ha                       |              |  |                                   |                                |   |   |
|                  | Land reclaimed in other areas (green belts etc.)                            | An indicator of better environmental performance   | Ha                       |              |  |                                   |                                |   |   |
|                  | Agricultural land converted for dumps                                       | An Indication of the potential loss to agriculture   | Ha                       |              |  |                                   |                                |   |   |
|                  | Vegetation undertaken on dumps  | Improved environmental performance   | Ha under vegetation      |              |  |                                   |                                |   |   |
| Biodiversity     | Total number of exotic species introduced in mine                           | Lack of knowledge or biodiversity concern  | Number                   |              |  |                                   |                                |   |   |
|                  | Relative abundance of exotic species within mine                            | Lack of knowledge or biodiversity concern  | ( % of particular group) |              |  |                                   |                                |   |   |
|                  | Area of restored or secondary forest  | Indication of better biodiversity practice   | Ha                       |              |  |                                   |                                |   |   |
|                  | Number of indigenous species used for revegetation                          | Indicates biodiversity concern   |                          |              |  |                                   |                                |   |   |
|                  | Area of man made forests /plantations                                       |  | Ha                       |              |  |                                   |                                |   |   |
|                  | Annual land use change in mine lease  |  | Ha                       |              |  |                                   |                                |   |   |
|                  | Amount spent on post mining land reclamation                                |  | Rs. /annum               |              |  |                                   |                                |   |   |
| Health/          | Doctor to patient ratio   |  | No.                      |              |  |                                   |                                |   |   |
| Health/          | Basic sanitation  |  | % of pop                 |              |  |                                   |                                |   |   |
| Facilities       | Access to safe drinking water   |  | % of pop                 |              |  |                                   |                                |   |   |
|                  | Hospitals/PMC   |  | % of pop                 |              |  |                                   |                                |   |   |
|                  | Number of hospital admissions due to accidents in mines                     | Assesses accidents occurring in mines  | No./yr                   |              |  |                                   |                                |   |   |
|                  | No. of visits due to respiratory problems                                   | Assesses the impact of air quality on health   | No./yr                   |              |  |                                   |                                |   |   |
|                  | Number of patients with eye problems  | Assesses eye problems occurring due to dust in the mines   | No./yr                   |              |  |                                   |                                |   |   |
|                  | Number of road accidents  | Assesses accidents occurring during ore transportation   | No./yr                   |              |  |                                   |                                |   |   |
|                  | Number of patients treated for typhoid/cholera                              | Assesses level of faecal contamination, possibly due to inadequate sanitation facilities         | No./yr                   |              |  |                                   |                                |   |   |
|                  | Number of salmonella typhi/paratyphi (typhoid bacteria) and Vibrio cholerae | Provides an indication of faecal contamination, possible due to inadequate sanitation facilities | No.                      |              |  |                                   |                                |   |   |



| Issues                       | Indicators   | Relevance to   | Unit of   | To be  | Comments      | Do you   | If you do | Are you the  | If data do not |
|------------------------------|--|--|-----------|--------|---------------|----------|-----------|--------------|----------------|
|                              |  | environmental & social   | measure-  | filled | Is the indi-  | collect  | collect   | authority to | exist can they |
|                              |  | sustainability objectives  | ment      |        | cator useful? | the data | in what   | collect the  | be collected?  |
|                              |  |  |           |        | Yes/No        | Yes/No   | form      | data Yes/No  | Yes/No         |
| Land: issues of compensation | Number of compensation payments made per year                  | A proxy indicator of impacts on agriculture and compensations made   | Nos       |        |               |          |           |              |                |
|                              | Amount of compensation paid to farmers                         | An indicator of actual compensations made for impacts caused         | Rs/ annum |        |               |          |           |              |                |
|                              | Instances of dissatisfaction relating to compensation payments | An indicator that perhaps compensations are not perceived adequately | No/annum  |        |               |          |           |              |                |
|                              | Baseline data collected to establish compensation amount       |  |           |        |               |          |           |              |                |

**ANNEXURE II**  
**Responses to the indicator testing:**  
**Mine company**



### For companies: ESPIs at mine site level

| ISSUES             | INDICATORS   | USEFUL & FEASIBLE | NOT USEFUL | NOT FEASIBLE |
|--------------------|--|-------------------|------------|--------------|
| Life of the mine   | Estimated R/P ratio of mine  | ✓                 |            |              |
| Working conditions | No. of fatal accidents   | ✓                 |            |              |
|                    | No. of serious accidents   | ✓                 |            |              |
|                    | No. of minor accidents   | ✓                 |            |              |
| Ore quality        | Min - Max Fe grades  | ✓                 |            |              |
|                    | Type of grade (Lumpy, etc.)  | ✓                 |            |              |
|                    | Import high grade ore for upgrade                                    | ✓                 |            |              |
|                    | Technological upgradation of low grade to high grade                 | ✓                 |            |              |
| Land for dumping   | Existing area occupied by dumps                                      | ✓                 |            |              |
|                    | Additional barren land required for dumping                          | ✓                 |            |              |
|                    | Dump management such as terracing, contour, bunding, trenches, etc.  | ✓                 |            |              |
|                    | Dumps on forested lands  |                   | ✓          | ✓            |
|                    | Barren land used for dumping   | ✓                 |            |              |
|                    | Land reclaimed in dump area  | ✓                 |            |              |
|                    | Land reclaimed in excavated area                                     | ✓                 |            |              |
|                    | Land reclaimed in other areas (green belt, etc.)                     | ✓                 |            |              |
|                    | Agricultural land converted for dumps                                | ✓                 |            |              |
|                    | Vegetation undertaken on dumps                                       | ✓                 |            |              |
| NGO/PIL pressure   | Amount of time spent on litigation/court cases                       |                   | ✓          | ✓            |
|                    | No. of court cases involved in                                       |                   | ✓          | ✓            |
|                    | Expenditure on litigation  |                   | ✓          | ✓            |
| Expenditure        | Traditional (material, manpower, capital) exp.                       |                   |            | ✓            |
|                    | Environmental expenditure  | ✓                 |            |              |
|                    | Social expenditure   | ✓                 |            |              |
| Water              | Waste water treated  | ✓                 |            |              |
|                    | Tailings water recycled  | ✓                 |            |              |
|                    | Is there a payment of water cess?                                    | ✓                 |            |              |
|                    | Is the mine working below water table?                               | ✓                 |            |              |
|                    | Beneficiation plant for effluent treated                             | ✓                 |            |              |
|                    | Expenditure on water quality improvement                             | ✓                 |            |              |
|                    | Ground water pumped  |                   | ✓          |              |
|                    | Surface water used   |                   | ✓          |              |
|                    | Are you monitoring the water quality in nearby water body?           | ✓                 |            |              |
|                    | If yes : TSS   |                   |            |              |
|                    | Water quality BOD  | ✓                 |            |              |
|                    | Water quality pH   | ✓                 |            |              |
|                    | Metal concentration in sediment, Pb                                  | ✓                 |            |              |
|                    | Metal concentration in sediment, Cd                                  | ✓                 |            |              |
|                    | Metal concentration in sediment, Hg                                  | ✓                 |            |              |
|                    | Use of pumped out water  | ✓                 |            |              |
|                    | Pit water supplied for agricultural use after filtration             | ✓                 |            |              |
|                    | Pit water supplied after treatment for drinking purpose              | ✓                 |            |              |
|                    | Water utilisation from abandoned pits                                | ✓                 |            |              |
| Air                | Avg. amount of ore per truck leaving your mine site on a typical day | ✓                 |            |              |

| ISSUES                      | INDICATORS  | USEFUL & FEASIBLE | NOT    |          |
|-----------------------------|---|-------------------|--------|----------|
|                             |   |                   | USEFUL | FEASIBLE |
| Air (contd.)                | Expenditure on air pollution abatement (green belt, watering of roads, etc) | ✓                 |        |          |
|                             | TP management practices adopted   | ✓                 |        |          |
|                             | No. of pits selected for backfilling or backfilled                          | ✓                 |        |          |
|                             | Are you monitoring air quality in the mine?                                 | ✓                 |        |          |
| Biodiversity                | Total no. of exotic species introduced in mine lease area                   | ✓                 |        |          |
|                             | Relative abundance of exotic species within mine lease area                 | ✓                 |        |          |
|                             | Area of restored or secondary forest  | ✓                 |        |          |
|                             | No. of indigenous species used for vegetation                               | ✓                 |        |          |
|                             | Area of man made forests/ plantations                                       | ✓                 |        |          |
|                             | Annual land use change in mine lease  | ✓                 |        |          |
|                             | Amount spent on post mining land reclamation                                | ✓                 |        |          |
| Health                      | Alcohol related absenteeism   |                   | ✓      |          |
|                             | Health facility provided at mine site                                       | ✓                 |        |          |
|                             | No. of times workers use health facilities within mine                      |                   | ✓      |          |
|                             | Medical reimbursement expenses  | ✓                 |        |          |
|                             | Attention to respiratory disorders  |                   | ✓      |          |
| Land issues of compensation | Types of injury at mine site  | ✓                 |        |          |
|                             | No. of compensation payments made per year                                  | ✓                 |        |          |
|                             | Amount of compensation paid to farmers                                      | ✓                 |        |          |
|                             | Instances of disaffection relating to compensation payments.                |                   | ✓      | ✓        |

### Companies: indicators of internal and external CSR

| ISSUES                  | INDICATORS  | USEFUL & FEASIBLE | NOT    |          |
|-------------------------|---|-------------------|--------|----------|
|                         |   |                   | USEFUL | FEASIBLE |
| Worker related concerns | Amount spent on training or related costs   | ✓                 |        |          |
|                         | Average wage paid: skilled  | ✓                 |        |          |
|                         | Average wage paid: semi-skilled   | ✓                 |        |          |
|                         | Change in real average employee wage (VDA)  | ✓                 |        |          |
|                         | System for productivity linked pay increments                                     | ✓                 |        |          |
|                         | Health benefits provided to employees   | ✓                 |        |          |
|                         | Health benefits extended to families of the employee                              | ✓                 |        |          |
|                         | Comprehensive health insurance  | ✓                 |        |          |
|                         | No. of worker related problems  |                   |        | ✓        |
|                         | Role of workers in decision making  | ✓                 |        |          |
|                         | Employment welfare schemes occupational   | ✓                 |        |          |
|                         | Attention to stress related disorders (counselling, other)                        |                   |        | ✓        |
|                         | Investment in injury prevention   | ✓                 |        |          |
|                         | A full fledged health clinic with a regular doctor                                | ✓                 |        |          |
|                         | ESI/welfare cess provided to employees  | ✓                 |        |          |
|                         | Frequency and type of discrimination - related                                    |                   |        | ✓        |
|                         | Number & type of legal actions concerning anti-union practices                    |                   |        | ✓        |
|                         | "Local hiring and training" in employment policy                                  | ✓                 |        |          |
|                         | Proportion of employees leaving employment before completion of contracted period |                   |        | ✓        |
|                         | Refusal rate of job offers  |                   |        | ✓        |
|                         | Workers participation in management   | ✓                 |        |          |

| ISSUES  | INDICATORS  | USEFUL&FEASIBLE | NOT USEFUL |
|---|---|-----------------|------------|
| Worker related concerns (contd.)                                    | Programmes to foster worker improvement (HRD programmes)  | ✓               |            |
|   | Phased rehabilitation of retired or laid off workers  | ✓               |            |
|   | Investment per worker in illness & injury prevention  | ✓               |            |
|   | Counselling to workers affected by alcoholism or stress disorders   | ✓               |            |
|   | Staff grievance procedures in place   | ✓               |            |
| Quality of management   | Are tax/royalty amounts reported in company reports?  | ✓               |            |
|   | Proportion of woman holding executive, senior and middle level management   | ✓               |            |
| Capability to innovate  | Level of R&D spending   | ✓               |            |
|   | Number of R&D personnel   | ✓               |            |
| Market shares   | Traditional markets   | ✓               |            |
|   | Emerging markets (last 10 yrs)  | ✓               |            |
| Quality control   | Is your company an ISO - 9000 company?  | ✓               |            |
| Environmental management policy                                     | Environmental Protection Expenditures   | ✓               |            |
|   | Do you have an EIA and SA for your projects   | ✓               |            |
|   | Is your company an ISO - 14000 company or   | ✓               |            |
|   | Aspiring to be one? Any other standard?   | ✓               |            |
|   | Comply to national and local regulations  | ✓               |            |
|   | Supply information on request related to environmental performance and management   | ✓               |            |
|   | Arrange open days/visits for the purpose of explaining environmental management at the site to members of the community                             | ✓               |            |
|   | Proactively disseminate information regarding environmental performance to the public   | ✓               |            |
|   | Seek to educate the public about the environmental impact of mining and a remedial and preventative method used by the company through various fora | ✓               |            |
|   | Employ local people to assist the company in prevention and remediation of environmental impacts at your project                                    | ✓               |            |
|   |   |                 |            |
|   |   |                 |            |
| Closure issues (relevant to companies where mines are closing down) | Financial support for job search and relocation   |                 | ✓          |
|   | Abandoned mine dump management  | ✓               |            |
|   | Plan for mine closure: environmental  | ✓               |            |
|   | Plan for mine closure: social rehabilitation  | ✓               |            |
|   | Compensation packages for workers   | ✓               |            |
| Investment in the mining region: Human / Physical                   | Plan for mine pit rehabilitation?   | ✓               |            |
|   | Investment in mine roads  | ✓               |            |
|   | Investment in schools/training facilities   | ✓               |            |
|   | Investment in toilets/sanitation facilities   | ✓               |            |
|   | % of corporate social investment budget to annual profit of company   | ✓               |            |
|   | Do you fund an occupational training centre?  | ✓               |            |
|   | Investment in community hospitals   | ✓               |            |
|   | Investment in playgrounds/clubs/parks   | ✓               |            |
|   | Are you a member of the Minerals foundation for Goa?  | ✓               |            |

| ISSUES                       | INDICATORS   | USEFUL&FEASIBLE | NOT USEFUL |
|------------------------------|--|-----------------|------------|
| Social & community relations | Does your company have a community relations officer/team ?  | ✓               |            |
|                              | Practice of community affairs officer reporting directly to the senior community affairs manager and/or GM | ✓               |            |
|                              | Incidences of conflict between company personnel and community members                                     |                 | ✓          |
|                              | Involvement in local affairs   | ✓               |            |
|                              | Do you have any management staff drawn from local communities  | ✓               |            |
|                              | No. of litigious actions against company   |                 | ✓          |
|                              | Corporate policy/mission statement demonstrating a commitment to community engagement and relations        | ✓               |            |
| Land access negotiation      | Type of approach to negotiations: A legalist approach or a post sale livelihood approach                   | ✓               |            |
|                              | Existence of prior community consultation  | ✓               |            |
| Participation                | Representation of local communities in decision making   | ✓               |            |
|                              | Does your company provide community access to information  | ✓               |            |
|                              | Research in to community perception of the project   | ✓               |            |
| Effective governance         | Time spent to get approvals under various acts.  | ✓               |            |
|                              | Bureaucratic delays  | ✓               |            |
|                              | Time spent with bureaucrats  | ✓               |            |
|                              | Need for 'incentives' to get things done   |                 | ✓          |
|                              | Citizen, businesses can file law suits against government  | ✓               |            |
|                              | Government attentive to problems of company  | ✓               |            |

### Local government: village level indicators

| ISSUES               | INDICATORS   | USEFUL & FEASIBLE | NOT USEFUL |
|----------------------|--|-------------------|------------|
| <b>Environment:</b>  |  |                   |            |
| <b>Water quality</b> | Monitoring level of groundwater wells                                    | ✓                 |            |
|                      | Change in ground water recharging area                                   | ✓                 |            |
|                      | Surface water monitoring   | ✓                 |            |
|                      | Water pH (surface & groundwater)   | ✓                 |            |
|                      | Water BOD (surface & groundwater)  | ✓                 |            |
|                      | Water TDS (surface & groundwater)  | ✓                 |            |
|                      | Water coliform (surface & groundwater)                                   | ✓                 |            |
|                      | Water turbidity (surface & groundwater)                                  | ✓                 |            |
|                      | Wells dry up during summer   | ✓                 |            |
|                      | Siltling of water bodies   | ✓                 |            |
|                      | Dependence on tankers  | ✓                 |            |
|                      | Shortage of water for domestic consumption                               |                   |            |
|                      |  |                   |            |
| <b>Air</b>           | Frequency of truck movements   | ✓                 |            |
|                      | SPM levels   | ✓                 |            |
|                      | Enforcement of air quality standards                                     | ✓                 |            |
|                      | AQ Monitoring  |                   |            |
| <b>Land</b>          | % Area of primary forest or reserved forest                              | ✓                 |            |
|                      | % Area of degraded forest  | ✓                 |            |
|                      | % Area under managed forest  | ✓                 |            |
|                      | Land use plan for mining areas   | ✓                 |            |
|                      | Compositional changes in vegetation cover e.g. mono-cultural plantations | ✓                 |            |
|                      | Awareness of the community about the importance of afforestation         | ✓                 |            |
|                      | Soil monitoring  | ✓                 |            |
|                      | Existence of uncultivated land   | ✓                 |            |
|                      | New areas brought under mining   | ✓                 |            |
|                      | Increase in degraded land  | ✓                 |            |
|                      | Gain/decline in agri output per unit area or input                       | ✓                 |            |
|                      | Number of land slides/annum  | ✓                 |            |
|                      | Changes in soil nutrient status  |                   |            |
|                      |  |                   |            |

| ISSUES                          | INDICATORS   | USEFUL & FEASIBLE | NOT USEFUL |
|---------------------------------|--|-------------------|------------|
| Land<br>(contd.)                | Changes in organic matter in soil  | ✓                 |            |
|                                 | Salutation of agricultural land and)                                       | ✓                 |            |
|                                 | Increase in soil erosion   | ✓                 |            |
|                                 | Expansion of area under colonies for mine workers, offices, workshops etc. | ✓                 |            |
|                                 | Cattle population  | ✓                 |            |
|                                 | Cattle on roads  | ✓                 |            |
|                                 | Tree planting  | ✓                 |            |
|                                 | Change in forest cover   | ✓                 |            |
| Land for<br>dumping             | Existing area occupied by dumps  | ✓                 |            |
|                                 | Forest land used for dumping   | ✓                 |            |
|                                 | Barren land used for dumping   | ✓                 |            |
|                                 | Land reclaimed in dump area  | ✓                 |            |
|                                 | Land reclaimed in excavated area   | ✓                 |            |
|                                 | Land reclaimed in other areas (green belts etc.)                           | ✓                 |            |
|                                 | Agricultural land converted for dumps                                      | ✓                 |            |
|                                 | Vegetation undertaken on dumps   | ✓                 |            |
| Biodiversity                    | Total number of exotic species introduced in mine lease area               | ✓                 |            |
|                                 | Relative abundance of exotic species within mine lease area                | ✓                 |            |
|                                 | Area of restored or secondary forest                                       | ✓                 |            |
|                                 | Number of indigenous species used for renegotiation                        | ✓                 |            |
|                                 | Area of man made forests/plantations                                       | ✓                 |            |
|                                 | Annual land use change in mine lease                                       | ✓                 |            |
|                                 | Amount spent on post mining land reclamation                               | ✓                 |            |
| Health/<br>Health<br>facilities | Doctor to patient ratio  | ✓                 |            |
|                                 | Basic sanitation   | ✓                 |            |
|                                 | Access to safe drinking water  | ✓                 |            |
|                                 | Hospitals/PMC  | ✓                 |            |
|                                 | Number of hospital admissions due to accidents in mines                    | ✓                 |            |
|                                 | Number of visits due to respiratory problems                               | ✓                 |            |
|                                 | Number of patients with eye problems                                       | ✓                 |            |
|                                 | Number of road accidents   | ✓                 |            |
|                                 | Number of patients treated for typhoid/cholera                             | ✓                 |            |

| ISSUES                                      | INDICATORS  | USEFUL & FEASIBLE | NOT USEFUL |
|---|---|-------------------|------------|
| Health/<br>Health<br>facilities<br>(contd.) | Number of salmonella typhi/paratyphi (typhoid bacteria) and Vibrio cholerae | ✓                 |            |
|   | Number of tests positive for enteric diseases (e.g. Widal)                  | ✓                 |            |
|   | Number of hospital admissions due to diarrhoea/dysentery                    | ✓                 |            |
|   | Alcohol related visits to hospitals   | ✓                 |            |
|   | State health expenditure devoted to local health care                       | ✓                 |            |
|   | Motor vehicle accidents/injury  | ✓                 |            |
|   | Hospital admissions for childhood respiratory diseases                      | ✓                 |            |
|   | Hospital admissions for other respiratory diseases                          | ✓                 |            |
|   | Hospital admissions for TB  | ✓                 |            |
|   | Hospitalisation by main cause /hospital days by main cause                  | ✓                 |            |
|   | Ratio of hospital beds patients   |                   |            |
|   |   |                   |            |
| Closure phase                               | Unemployment rate   | ✓                 |            |
|   | Net migration rate  | ✓                 |            |
|   | Part time employment  | ✓                 |            |
|   | Labour force participation  | ✓                 |            |
|   | Worker to population ratio  | ✓                 |            |
|   | Jobs lost by type   | ✓                 |            |
|   | Diversity of local jobs   | ✓                 |            |
|   | Incidence of depression   | ✓                 |            |
|   | Income stability  | ✓                 |            |
|   | Water contamination   | ✓                 |            |
|   | Preserve the top soil to use at time of mine closure                        |                   |            |
| Land:<br>Issues of<br>compensation          | Number of compensation payments made per year                               | ✓                 |            |
|   | Amount of compensation paid to farmers                                      | ✓                 |            |
|   | Instances of disaffection relating to compensation payments                 | ✓                 |            |
|   | Baseline data collected to establish compensation amount                    |                   |            |

**ANNEXURE III**  
**Responses to indicator testing:**  
**Government level**



### *Town and Country Planning*

- All the indicators are useful.
- With regard to the land issue, the Department of Science and Technology and Environment, Department of Industries and Mines, and the Agriculture Department are authorised to collect the data.
- TCP is consulted only if there is any construction within the mine lease area.
- TCP is the coordinating government body in the State Land Use Board. Indian Bureau of Mines and Directorate of Industries and Mines approve the mine plan.
- Remote sensing techniques and other maps including soil map are available with the Department of Science and Technology and Environment, hence they can monitor some of the indicators that are mentioned in this sheet.
- Another issue that needs to be addressed is, that the soil from mining is used (sold) for land-filling in other areas. This needs to be controlled.

### *Department of Agriculture*

- All the indicators relating to issues like water quality, land and compensation are useful.
- Water quality data is collected by the Water Resources Department (Irrigation).
- The Department of Census and the Department of Science, Technology and Environment collect some of the data relating to issues of land.
- With regard to the issue of compensation; the Collector, the Mamlatdar and Zonal Agricultural Officer are involved. Department of Agriculture is involved only when complaints/applications are made and Department of Agriculture is involved to assess loss from agriculture. Compensation is for the profit lost and not for the cost of cultivation. The payments are made by mamlatdar/collector.
- Agricultural department is consulted when there is conversion from agricultural land to non-agricultural land for construction purpose. With regard to dumping of mining rejects on agricultural land, it is unclear under whose jurisdiction it comes.
- Data collected by Department of Agriculture is not continuously collected. It is also randomly collected largely when the need arises. The data collected is with regard to capability, erosion status and degradation studies.

### *Department of Forest*

- All the indicators relating to issues like land and biodiversity are useful. The Forest Department collects some of this data.
- Whenever any mining activity is to be carried in a forest area that is within the mine leased area, then the mining company needs to obtain a clearance from the Department of Forest. At this point of time the mining companies then provide an inventory to the Forest Department. Within the lease area the role of the Forest

Department is limited and the Indian Bureau of Mines is the main government body, which has powers in the mining belt.

- There is no data on area exclusively used for dumping etc. The approval is given for diversion without a break-up of dumping area, pits, etc.
- Lease wise forest data is available, however the exact demarcation of leases is unclear. Forest area under each village is also available.
- Mines Environmental Council within the Indian Bureau of Mines is in charge of monitoring, as they collect data every 5 years.
- Earlier the Indian Bureau of Mines did not allow for back-filling in the mined area. However this has been changed now and this has resulted in the reclamation of land under forest area in mine lease area. Once the lease expires this land goes back to the forest department.

### *Department of Science, Technology and Environment*

- All the indicators are useful.
- DSTE does not collect data with regard to issues like water quality, air, land etc. The groundwater act has a provision for monitoring, which the water resources department does.
- As flood control comes under the Water Resources Department, siltation of water bodies comes under Water Resources. If siltation affects river navigation then Captain of Ports is involved.
- Most of the data with regard to issues of land, data is maintained by Forest Department, Department of Industries and Mines, IBM, Department of Agriculture, and the *Panchayat* etc.
- SPCB monitors at point sources of pollution; non-point sources are not monitored. Monitoring is done when the need arises or when there is a complaint. Statutorily SPCB is not required to monitor.
- Department of Industries and Mines and IBM have concession map of active and non-active mine lease.
- DSTE have satellite imageries and can compare changes but this has no statutory backing. Other government departments can obtain this data from DSTE. DSTE is to provide scientific inputs and prepare maps. Research and development advice is not part of the statutory duty.
- Further no department can take action against violation of rules and regulations; instead they have to take the matter to the court.

## *Water Resources Department*

- All the indicators relating to water quality are useful.
- WRD is the authorised government department to collect and publish the data relating to water quality.
- Data on water quality is currently collected by the PWD. However this is restricted to drinking water, and is done at the treatment plants. With the passing of the ground water bill, water resources department is now required to statutorily monitor the water quality of ground water.
- The ground water monitoring act will also lead to collection of data regarding recharge level, etc. As of now they are in the process of collecting all the data. Once this is completed, they plan to publish it; however this will be information on data collected and not provide inferences.
- As of now the data, which was available to the department, was from various small studies.

## *State Pollution Control Board*

- All the indicators relating to issues like water quality and air, etc are useful.
- They are the authorised government body to collect the data relating to pollution. Data is collected and monitored when the need arises or when there is a complaint.
- Within the mine lease area all data regarding pollution is collected by IBM. SPCB looks at data outside the lease area. Here SPCB monitors on receipt of the complaints.
- SPCB is monitoring the water quality for around 32 parameters at their water stations along the Mondovi and Zuari River. This however does not cover the mining villages. This exercise is done for the Central Government. Air quality monitoring is done at two stations; Panaji and Vasco, this again is done for the Central Government. The parameters checked for air quality are given by the Central Government.
- SPCB is on various committees, including that on compensation and SPCB's role is advisory.
- Benefaction plant operation needs clearance from SPCB and SPCB monitors the processed water.
- SPCB can also give inputs to *panchayat* whenever approached.
- Water odour is another parameter, but this cannot be measured.

## PWD

- All the indicators relating to water quality are useful.
- They collect data for most of the indicators relating to water quality. All the water quality parameters are checked at the treatment plants itself or the wells from where the water is supplied to villagers who are dependent on the PWD water tanker.
- Private wells are checked by the health services on receipt of complaints. Data for the mining villages can be procured from the Executive Engineer, Section 17, and Porvorim.
- The department of PWD supplies water through tankers.

## *Labour Commissioner & Director of Employment Exchange*

- Department of Employment Exchange or the Department of Labour does not collect any data relating to issues of the closure phase. Since mining comes under the central government, the labour enforcement officer collects such data.
- The labour officer collects data on the retrenchment of workers. These workers are those who are on the muster roll and are in continuous service for a minimum of 240 days. Muster rolls of mining companies have data on the number of people employed but this does not include contract labourers.
- The Employment Exchange has data on the number of people who are unemployed and need assistance in seeking employment, and for this purpose have registered their names with the department.

## *Department of Panchayats*

- *Panchayats* do not collect information relating to water quality, air quality, land, bio-diversity, health and health facilities, compensation and issues related to closure phase in the mining villages. However Schedule I of the *Panchayat Act* of 1994, lists out the duties of the *panchayats*. Thus legally *panchayats* are competent bodies to collect the above data. However, in practice it is not done due to lack of funds and staff. The Directorate of *Panchayats* appoints and pays for a secretary (Upper division clerk's scale) for each *panchayat*. Other additional staff needs to be appointed and paid by the *panchayats* itself. Lack of funds result in understaffed *panchayats*, which in turn retards their functioning. The *Panchayats* have powers and functions on par with that of the Municipalities, which are not discharged due to the above reasons. Further the *Panchayat Act* of 1994 empowered the third tier of the Government only recently. Prior to this act, the Collector's Office controlled the village *panchayats*. Director of *Panchayats* located at the Collectors office and the State government carried out most of the duties. *Panchayats* have allowed this trend to continue even today.

## *Department of Health Services*

- All the indicators are useful.
- DHS collects the data on water quality whenever required or if there are any complaints from the village *panchayat* or villagers. They take samples of water from the wells which are used and not used by the people, and also from abandoned mine pits where water is logged, *nallahs*, drains which are the breeding sites for mosquitoes.
- Their sub-centres register number of cases, which are relating to different indicators or the primary health centres in the village either when people come to them or they visit the patients. Records from private practitioners are also collected by the DHS.
- The number of casualties due to mine related flooding is being taken care by the disaster management plan through the Collectorate of North and South Goa in which all the government departments are involved.
- Department of Health Services carry out various programmes such as health education, etc.
- Department of Health also conducts a survey in the villages which is conducted by the staff of the sub-centres or the primary health centres in which they collect many details such as the number of children born and have been immunized, malaria patients, TB patients, etc. The same data is then forwarded to the DHS by the primary centres for their records.
- DHS has a sub-centre in the villages for every 5000 people and a primary health centre for every 30000 people. Community health centre is also provided. There are two district centres, namely; Asilo and Hospicio.
- Sub-centres - one auxillary nurse, one male attendant
- One doctor visits once in a week.
- Primary centre: Three medical practioners.
- Drug detection centre, Asilo.
- Dr Sawant - is in-charge of TB Control Programme, near National Theatre.
- A STD clinic was earlier at Sanvordem. Now it is shifted to Margao
- GATES - 102: Goa Accident, Trauma and Emergency Services provide ambulance services to a number of centres and to anybody who requires it.

## *Department of Animal Husbandry*

- Department of Animal Husbandry does not collect any data, it is done by the Department of Planning, Statistics and Evaluation. Department of Census collects it. Village-wise data is available in the summary sheets prepared by the Department of Planning, Statistics and Evaluation, but this is not published. Data regarding grazing lands is not available.

## *Department of Industries and Mines*

- All the indicators are useful.
- Water quality or the air quality data is not collected by the DIM. Various different departments collect most of the data. Department of Industries and Mines have most of the data given to them by the mining companies for the renewal of the leases or any other purpose. DIM collects the data regarding issues like mine lease and economic issues relating to mining. Most of the data required in the indicator sheets are kept by the mine owners and this can be collected by the DIM, and hence will be in a suitable position to monitor.
- Mine owners are required to submit a mining plan, which includes land use plan. This is submitted to the IBM and DIM. The land use plan gives the scheme of mining which need not be true. Hence actual monitoring would be a better option.
- Baseline data is available since the 1950's.
- In case the DIM is brought into the issue of compensation, then they have data. But all the data could be collected from the revenue department.
- Department of Industries and Mines are in the process of preparing a database.

## **ANNEXURE IV**

### **Sources for indicator data needs**

DEPARTMENT: INDIAN BUREAU OF MINES

Issues: Water quality within the lease area

| Indicators                                |
|---|
| Monitoring level of groundwater wells     |
| Change in ground water recharging area    |
| Surface water monitoring                  |
| Water pH (surface and groundwater)        |
| Water BOD (surface and groundwater)       |
| Water TDS (surface and groundwater)       |
| Water coliform (surface and groundwater)  |
| Water turbidity (surface and groundwater) |
| Wells dry up during summer                |

Issues: Air within the lease area

| Indicators                           |
|--------------------------------------|
| SPM levels                           |
| Enforcement of air quality standards |
| AQ monitoring                        |

Issues: Land within the lease area

| Indicators                     |
|--------------------------------|
| Land use plan for mining areas |
| New areas brought under mining |
| Increase in degraded land      |
| Tree planting                  |
| Change in forest cover         |

Issues: Land for dumping within the lease area

| Indicators                                       |
|--|
| Existing area occupied by dumps                  |
| Forest land used for dumping                     |
| Barren land used for dumping                     |
| Land reclaimed in dump area                      |
| Land reclaimed in excavated area                 |
| Land reclaimed in other areas (green belts etc.) |
| Agricultural land converted for dumps            |
| Vegetation undertaken on dumps                   |



**Issues: Mine lease related within the lease area**

**Indicators**

Number of leases renewed  
Number of mines actually in operation  
Number of mines not worked for more than two years  
Mine leases which fall under forest area  
Number of abandoned mine pits  
Number of ore stacks held by each operators  
Monitoring of ore stack by roadside, jetty  
Amount of ground water pumped from the pits mine wise  
Number of pits with water

**Issues: Economic within the lease area**

**Indicators**

Actual production of ore mine wise  
Ore exported  
Royalty collected mine wise

**Issue: Biodiversity within the lease area**

**Indicators**

Total number of exotic species introduced in mine lease area  
Relative abundance of exotic species within mine lease area  
Area of restored or secondary forest  
Number of indigenous species used for revegetation  
Area of man made forests/plantations  
Annual land use change in mine lease  
Amount spent on post mining land reclamation

**Issues: Closure phase within the lease area**

**Indicators**

Water contamination

**DEPARTMENT: WATER RESOURCES DEPARTMENT**

**Issues: Water quality**

**Indicators**

Monitoring level of groundwater wells  
Change in ground water recharging area  
Surface water monitoring  
Siltting of water bodies  
Dependence on tankers

**Issues: Closure phase**

**Indicators**

Water contamination

## DEPARTMENT: STATE POLLUTION CONTROL BOARD

### Issues: Air out side the mining leased area

#### Indicators

SPM levels

Enforcement of air quality standards

AQ monitoring

Level of Mn in air

Level of gases such as SO<sub>2</sub>, NO<sub>x</sub>,

CO in air

Dust concentration in air

### Issues: Water quality out side the mining leased area

#### Indicators

Surface water monitoring

Water pH (surface and groundwater)

Water BOD (surface and groundwater)

Water TDS (surface and groundwater)

Water coliform (surface and groundwater)

Water turbidity (surface and groundwater)

Wells dry up during summer

Total viable count

Most probable number for potability of water

Total number of *E. coli* (Indicator bacteria)

Total count of bacteria

Total dissolved solids

Total suspended solids

Level of arsenic in water

Level of various metals in water

### Issues: Closure phase out side the mining leased area

#### Indicators

Water contamination

### Issues: Compensation outside the mining leased area

#### Indicators

Number of compensation payments made per year

Amount of compensation paid to farmers

Instances of disaffection relating to compensation payments

Baseline data collected to establish compensation amount

## DEPARTMENT: PUBLIC WORKS DEPARTMENT

### Issues: Water quality

#### Indicators

Dependence on tankers

Shortage of water for domestic consumption

## DEPARTMENT: FOREST DEPARTMENT

### Issues: Land

---

#### Indicators

---

% Area of primary forest or reserved forest

% Area of degraded forest

% Area under managed forest

Compositional changes in vegetation cover e.g. mono-cultural plantations awareness of the community about the importance of afforestation

Tree planting

Change in forest cover

---

## DEPARTMENT: HEALTH DEPARTMENT

### Issues: Water quality

---

#### Indicators

---

Water coliform (surface and groundwater)

Most probable number for potability of water

Total number of *E. coli* (indicator bacteria)

Total count of bacteria

---

### Issues: Health facilities

---

#### Indicators

---

Doctor to patient ratio

Access to safe drinking water

Hospitals/PMC

Number of hospital admissions due to accidents in mines

Number of visits due to respiratory problems

Number of patients with eye problems

Number of road accidents

Number of patients treated for typhoid/cholera

Number of salmonella typhi/paratyphi (typhoid bacteria) and vibrio cholerae

Number of tests positive for enteric diseases (e.g. Widal)

Number of hospital admissions due to diarrhoea /dysentery

Alcohol related visits to hospitals

State health expenditure devoted to local health care

Motor vehicle accidents/injury

Hospital admissions for childhood respiratory diseases

Hospital admissions for other respiratory diseases

Hospital admissions for TB

Hospitalization by main cause/hospital days by main cause

Ratio of hospital beds patients

Number of accidents in mines

Number of hospital admissions due to accidents in mines

Number of hospital visits due to respiratory problems

Number of patients with eye problems

Number of visits to ENT clinic

*Continued*

Table continued

**Indicators**

---

Number of casualties due to mine related flooding  
Number of patients treated for typhoid/cholera  
Number of salmonella typhi /paratyphi  
(typhoid bacteria) and vibrio cholerae isolated  
Number of tests positive for enteric diseases (eg. Widal)  
Number of hospital admissions due to diarrhoea/dysentery  
Number of visits with skin allergy  
Number of malaria cases detected  
Number of abandoned pits  
Increase/decrease in the number of mosquitoes as reported by locals  
Increase/decrease in the spray of insecticides by health authorities  
Number of cases/annum of bladder cancer  
Number of visits/hospital admissions related to nervous system  
Number of hospital admissions related to respiratory problems  
Number of cases/annum treated for STD  
Number of HIV positive cases  
Number of patients treated for alcoholism  
Number of visits to psychiatrists

---

**DEPARTMENT: DEPARTMENT OF INDUSTRIES AND MINES**

**Issues: Air**

**Indicators**

---

Frequency of truck movements

---

**Issues: Land**

**Indicators**

---

Land use plan for mining areas  
New areas brought under mining  
Increase in degraded land  
Expansion of area under colonies for mine workers, offices, workshops etc.  
Tree planting  
Change in forest cover

---

**Issues: Land for dumping**

**Indicators**

---

Existing area occupied by dumps  
Forest land used for dumping  
Barren land used for dumping  
Land reclaimed in dump area  
Land reclaimed in excavated area  
Land reclaimed in other areas (green belts etc.)  
Agricultural land converted for dumps  
Vegetation undertaken on dumps

---

**Issues: Mine lease**

**Indicators**

Number of leases renewed  
Number of mines actually in operation  
Number of mines not worked for more than two years  
Mine leases which fall under forest area  
Number of abandoned mine pits  
Number of ore stacks held by each operators  
Monitoring of ore stack by roadside, Jetty  
Amount of ground water pumped from the pits mine wise  
Number of pits with water

**Issues: Economic**

**Indicators**

Actual production of ore mine wise  
Ore exported  
Royalty collected mine wise

**Issues: Closure phase**

**Indicators**

Preserve the top soil to use at time of mine closure

**Issues: Biodiversity**

**Indicators**

Total number of exotic species introduced in mine lease area  
Relative abundance of exotic species within mine lease area  
Area of restored or secondary forest  
Number of indigenous species used for revegetation  
Area of man made forests/plantations  
Annual land use change in mine lease  
Amount spent on Post mining land reclamation

**Issues: Compensation**

**Indicators**

Number of compensation payments made per year  
Amount of compensation paid to farmers  
Instances of disaffection relating to compensation payments  
Baseline data collected to establish compensation amount

DEPARTMENT: AGRICULTURE DEPARTMENT

Issues: Land

Indicators

Soil monitoring

Existence of uncultivated land

Gain/decline in agriculture output per unit area or input

Changes in soil nutrient status

Changes in organic matter in soil

Siltation of agricultural land

Increase in soil erosion

Issues: Compensation

Indicators

Number of compensation payments made per year

Amount of compensation paid to farmers

Instances of disaffection relating to compensation payments

Baseline data collected to establish compensation amount

DEPARTMENT: MAMLATDAR (TALUKA LEVEL)

Issues: Land

Indicators

Existence of uncultivated land

Issues: Compensation

Indicators

Number of compensation payments made per year

Amount of compensation paid to farmers

Instances of disaffection relating to compensation payments

Baseline data collected to establish compensation amount

DEPARTMENT: COLLECTORATE

Issues: Compensation

Indicators

Number of compensation payments made per year

Amount of compensation paid to farmers

Instances of disaffection relating to compensation payments

Baseline data collected to establish compensation amount

DEPARTMENT: BLOCK DEVELOPMENT OFFICE (TALUKA LEVEL)

Issues: Compensation

Indicators

Number of compensation payments made per year  
Amount of compensation paid to farmers  
Instances of disaffection relating to compensation payments  
Baseline data collected to establish compensation amount

DEPARTMENT: DIRECTORATE OF SCIENCE TECHNOLOGY AND ENVIRONMENT

Issues: Land (By using remote sensing technology)

Indicators

% Area of primary forest or reserved forest  
% Area of degraded forest  
% Area under managed forest  
Compositional changes in vegetation cover e.g. mono-cultural plantations  
Soil monitoring  
New areas brought under mining  
Increase in degraded land  
Number of land slides  
Changes in soil nutrient status  
Changes in organic matter in soil  
Siltation of agricultural land  
Increase in soil erosion  
Tree planting  
Change in forest cover

DEPARTMENT: METROLOGICAL DEPARTMENT

Issues: Land

Indicators

Number of land slides

DEPARTMENT: IRRIGATION DEPARTMENT

Issues: Land

Indicators

Number of land slides

DEPARTMENT: DIRECTORATE OF TRANSPORT

|                              |
|------------------------------|
| Issues: Air                  |
| Indicators                   |
| Frequency of truck movements |

DEPARTMENT: DIRECTORATE OF ANIMAL HUSBANDRY

|                   |
|-------------------|
| Issues: Land      |
| Indicators        |
| Cattle population |
| Cattle on roads   |

DEPARTMENT: DIRECTORATE OF PLANNING, STATISTICS AND EVALUATION

|                            |
|----------------------------|
| Issues: Land               |
| Indicators                 |
| Cattle population          |
| Cattle on roads            |
| Issues: Closure Phase      |
| Indicators                 |
| Labour force participation |

DEPARTMENT: PANCHAYAT

|  |
|--|
| Issue: Land  |
| Indicators   |
| Expansion of area under colonies for mine workers, offices, workshops etc. |
| Issue: Health  |
| Indicators   |
| Basic sanitation   |

DEPARTMENT: TOWN AND COUNTRY PLANNING

|  |
|--|
| Issue: Land  |
| Indicators   |
| Expansion of area under colonies for mine workers, offices, workshops etc. |



DEPARTMENT: LABOUR ENFORCEMENT DEPARTMENT

Issues: Closure phase

Indicators

Unemployment rate

Net migration rate

Part time employment

Jobs lost by type

Diversity of local jobs

Incidence of depression

Income stability

DEPARTMENT: MINES SAFETY

Issues: Closure phase

Indicators

Jobs lost by type

Diversity of local jobs

Incidence of depression

Income stability

**ANNEXURE V**  
**Village voices**  
**(from focus group meetings held in 2000-2001)**

## These village voices highlight the conditions that affect their lives adversely and explain differences across villages

### Village 1

#### Land and agriculture:

The village at a time was known for its fields and horticulture. Now, the fields are all dried up and the people depending on agriculture have suffered. Agriculture is the only source of livelihood for many of them 'We will starve if we can't get any returns from agriculture.' Agriculture was the main source of income for locals and they are not prepared to lose their long-term livelihood. Due to the silt from mining areas, the fields can't be cultivated. Even if the silt is removed, it gets filled again 'We require compensation for undoing the damage already caused'.

Scarcity of ground water is another issue, locals felt impotent to solve this problem. Water shortage is the major problem for the village. 'We do not get enough water at home and for our fields'.

Recent floods that occurred have caused considerable hardship. Due to the collapse of the overburden dumps of an abandoned mine, the *nallah* was filled with silt. There was a flood as the rainwater could not find its way. The houses of the local people collapsed.

No job opportunities to the local people, in the mining sector.

#### Women specific issues:

The women felt that the major issues of concern affecting their lives were scarcity of groundwater and siltation of fields. In addition, they complained about lack of medical facilities (one doctor visiting the village once a week, no pharmacy in the area), unemployment. They complained that whenever they have raised the issue of providing a job to one person from each family, mining companies have never agreed. In some families there are four-five people who are provided jobs with mining companies. The locals are told that it is because they have leased their land to mining activity that they are given jobs.

#### Access to education:

Most people were satisfied about the education facilities provided to the children in the village.

#### Health care:

Lack of medical facilities (doctor, medicines, ambulance) and failure of mining companies or government to provide these facilities.

#### Employment:

Unemployment is a common problem in the village. Educated youths can't find suitable jobs for themselves.

Mining companies employ not many local people. Only if the land is leased for mining, they are willing to employ people from the family.

## Village 2

The main issues here are:

### Environmental:

Health, clean water, help farmers, *kulaghars* (betul nut farmers) and bridge income inequalities. *Panchayat* (local govt.) has done nothing against the perpetrators of water pollution. Dust and water pollution is the major problem-almost 90% of the problem. Earlier around 5-10 years ago there was no awareness, today there is an awareness of the positive as well as the negative effects of mining.

### Access to government:

The *panchayat* has no power. Above the *panchayat* is the State government, so the *panchayat* has no say. 'We wrote to the high court, and we were told to come through proper channels. We are not aware of what the proper channels are'. Before the *Panchayat* can contact the Department of Mines, the illegal quarry owners contact the department and then no action is taken. Mining companies take permission from Central government. So *panchayat* can't say much. The mining lobbies control politics in Goa.

### Access to education:

Students have to walk 5-6 kms to reach the schools and in the monsoon the problem is further compounded as there is silt/slush ('rev') on both sides of the road. Even one truck is enough to cause this problem in the monsoon. 'We have asked mine companies to provide school children transportation, today only one company is providing bus transport for the students. This was possible because I threatened to send students from school at the time of mine blasting operations'.

### Noise:

Not only from mining but there is an illegal metal quarry which is hardly 100 mts. away from the school and the blast has a very bad effect on the nearby vicinity on both people and wildlife.

### Water:

'Earlier we never had a flooding problem. It is in the past two years that we are experiencing floods. This is because the *nalla*s are filled with silt and therefore there is flooding.'

### Land:

Land is a crucial issue. Horticulture is affected, however worst affected is paddy. Mining companies do survey the land after the monsoon and, if there is any damage, they pay compensation to the aggrieved party. But the criteria on the basis of which compensation is made is not transparent. This should be more transparent. Some get the compensation and some don't get. 'Compensation is a temporary solution, we are looking for permanent solutions'. Lot of villagers are still interested in agriculture. Professional agriculturists want to continue with agriculture, compensation is asked by those who want to speculate. *Panchayat* is in a better position to process compensation as it is easily accessible. Hardly 10% of the villages know where the Zonal Agricultural office is.

### Mine closure:

Not all are directly involved. Those that are directly involved will be hit badly. People indirectly involved in mining don't solely depend on it and hence they will suffer from a decline in the additional source of income. There is no chance to learn new skills and the income from these new skills is very little compared to that earned from mining.

### Health:

The main problems are related to pollution and alcohol. Alcohol is a major problem and this is affecting the younger generation. There is a lot of gambling also. This could be because of more income due to mining absence of recreational facilities low educational background. Cashew feni (the local brew) does not affect people as badly as alcohol; but today most people prefer alcohol to feni.

### Women:

No, don't think they would be interested in employment in mines as that is a hard job.

## **ANNEXURE VI**

### **Versions of the QOL tool**

# QOL Indicators (Version I)

|  |
|--|
| Respondent No.   |
| Are you from this village?   |
| Number of years of stay  |
| Place of work (outside the village/same)                                     |
| Age  |
| Marital status   |
| Gender   |
| Occupation   |
| Income   |
| Education  |
| Number of people at home   |
| Number of rooms in your house  |
| Family type (joint/nuclear)  |
| Is there any major health problem in the household? (major illness, at home) |
| Has there been any death (not due to old age) recently at home?              |
| Is there any other major problem at home?                                    |
| ▪ Economic   |
| ▪ Personal   |
| ▪ Family (children's marriage/education/unemployment)                        |
| Are there any major problems at your village (robbery/group wars)            |

**Economic**

| Descriptive Indicators<br>(Respondent is asked to describe his/her resources and conditions)   | Evaluative indicators<br>(Respondent is asked to evaluate (in terms of satisfaction) his/her conditions)<br>Scale of satisfaction | Very dissatisfied | Dissatisfied | Neither dissatisfied nor satisfied | Satisfied | Very satisfied |
|--|---|-------------------|--------------|------------------------------------|-----------|----------------|
| Do you have a regular job (> 6 m/yr)?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | If yes, how satisfied are you with it?  | 1                 | 2            | 3                                  | 4         | 5              |
| What is your main occupation?  | How satisfied are you with it?  | 1                 | 2            | 3                                  | 4         | 5              |
| Is your job secure?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with the level of security?   | 1                 | 2            | 3                                  | 4         | 5              |
| What is your monthly wage or salary?   | How satisfied are you with your wages/salary?   | 1                 | 2            | 3                                  | 4         | 5              |
| What is the average income of your household? (Per month)  | How satisfied are you with it?  | 1                 | 2            | 3                                  | 4         | 5              |
| Would you be able to meet unforeseen expenses of upto Rs.5000 within a week? (From bank, kln, etc)<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with this cushion?  | 1                 | 2            | 3                                  | 4         | 5              |
| What material assets do you have? (jewellery, land)<br>List  | How satisfied are you with the amount of assets that you own?   | 1                 | 2            | 3                                  | 4         | 5              |
| Do you have access to any traditional livelihood opportunities?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | If yes, how do you rate these opportunities?  | 1                 | 2            | 3                                  | 4         | 5              |
| How much land do you own?<br>(in ha)   | How satisfied are you with it?  | 1                 | 2            | 3                                  | 4         | 5              |
| Do you have opportunities/access to learn new skills / develop old skills?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with these opportunities?   | 1                 | 2            | 3                                  | 4         | 5              |
| Do you have access to employment training programmes?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with them?  | 1                 | 2            | 3                                  | 4         | 5              |
| Is your family able to have 3 good meals a day?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with the nutritional value of the food that your household consumes?  | 1                 | 2            | 3                                  | 4         | 5              |
| How much do you spend on food per month?   | How satisfied are you with the affordability?   | 1                 | 2            | 3                                  | 4         | 5              |
| What is the main fuel used for cooking:<br>1. Gas <input type="checkbox"/> 2. Kerosene <input type="checkbox"/> 3. Fuel-wood <input type="checkbox"/> 4. Twigs <input type="checkbox"/> 5. Dung <input type="checkbox"/> 6. Any other <input type="checkbox"/> | How satisfied are you with this energy source?  | 1                 | 2            | 3                                  | 4         | 5              |

|  |   |   |   |   |   |   |
|--|---|---|---|---|---|---|
| If you use fuel wood for cooking, do you<br>1. Buy <input type="checkbox"/> 2. Collect <input type="checkbox"/>  |   |   |   |   |   |   |
| If collected, distance travelled:<br>Within 100 m <input type="checkbox"/><br>Within 500 m <input type="checkbox"/><br>Within 500m –1 km <input type="checkbox"/><br>> 1 km <input type="checkbox"/> | How satisfied are you with this availability?                                     | 1 | 2 | 3 | 4 | 5 |
| If bought, how much do you spend on fuel wood per month?   | How satisfied are you with the affordability?                                     | 1 | 2 | 3 | 4 | 5 |
| Do you have access to paved roads?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with the quality of roads?                                  | 1 | 2 | 3 | 4 | 5 |
| Do you have access to communication services (postal, email, telegraph)?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with the availability?                                      | 1 | 2 | 3 | 4 | 5 |
| Do you have access to electricity?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with the services?  | 1 | 2 | 3 | 4 | 5 |
| How much do you spend on electricity/month?  | How satisfied are you with the affordability?                                     | 1 | 2 | 3 | 4 | 5 |
| Do you avail of water distributed by public services?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with the availability?                                      | 1 | 2 | 3 | 4 | 5 |
| Do you use a telephone?<br>1. Yes      2. No <input type="checkbox"/> (✓ below)<br>a. Public telephone <input type="checkbox"/><br>b. At home <input type="checkbox"/>                               | How satisfied are you with the availability?                                      | 1 | 2 | 3 | 4 | 5 |
|  |   | 1 | 2 | 3 | 4 | 5 |
|  |   | 1 | 2 | 3 | 4 | 5 |
| Can you afford a phone at home?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with the affordability?                                     | 1 | 2 | 3 | 4 | 5 |
| Do you use the public transport system?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with availability/frequency of the public transport system? | 1 | 2 | 3 | 4 | 5 |
| How much do you spend on the public transport system/month?  | How satisfied are you with the affordability?                                     | 1 | 2 | 3 | 4 | 5 |
| Do you have any livestock?<br>(Number per type)  | If yes, are you satisfied with the livestock that you have?                       | 1 | 2 | 3 | 4 | 5 |
| Do you have places to water and pasture livestock?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with the availability of watering holes and pasture land?   | 1 | 2 | 3 | 4 | 5 |
| How much food do your cattle/livestock need per month/day/year?  | How satisfied are you with the availability?                                      | 1 | 2 | 3 | 4 | 5 |
| How much do you spend on food for cattle/livestock per month?  | How satisfied are you with the affordability?                                     | 1 | 2 | 3 | 4 | 5 |



|   |                                  |   |   |   |   |   |
|---|----------------------------------|---|---|---|---|---|
| Annual average/monthly income from livestock rearing (average)  | How satisfied are you with it?   | 1 | 2 | 3 | 4 | 5 |
| Do you fish in inland waters?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>       | How satisfied are you with it?   | 1 | 2 | 3 | 4 | 5 |
| What amenities (such as cars, TV, videos, telephone, fridge, pump set, tubewell) do you have?<br>List | How satisfied are you with them? | 1 | 2 | 3 | 4 | 5 |

#### Social

| Descriptive Indicators   | Evaluative Indicators  |             |             |             |             |             |
|--|--|-------------|-------------|-------------|-------------|-------------|
| Do you have the support of the extended family and/or friends?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with it?                                     | 1           | 2           | 3           | 4           | 5           |
| Do you have a good family life?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with it?                                     | 1           | 2           | 3           | 4           | 5           |
| Do you have good relations with relatives?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with it?                                     | 1           | 2           | 3           | 4           | 5           |
| Do you have a community life?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with it?                                     | 1           | 2           | 3           | 4           | 5           |
| Did/Do you have a choice in matters regarding marriage?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/> 3. Restricted <input type="checkbox"/>   | How satisfied are you with the degree of freedom?                  | 1           | 2           | 3           | 4           | 5           |
| Did /Do you have a choice regarding the number and spacing of children?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/> 3. Restricted <input type="checkbox"/>                                     | How satisfied are you with the degree of freedom?                  | 1           | 2           | 3           | 4           | 5           |
| Are you able to express solidarity with others?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with it?                                     | 1           | 2           | 3           | 4           | 5           |
| What educational qualification or level have you achieved? (✓ Below)<br>a. Primary level <input type="checkbox"/><br>b. Secondary level <input type="checkbox"/><br>c. Post secondary level <input type="checkbox"/> | How satisfied are you with quality of education that you have had? | 1<br>1<br>1 | 2<br>2<br>2 | 3<br>3<br>3 | 4<br>4<br>4 | 5<br>5<br>5 |
| Did you have easy access to education?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with it?                                     | 1           | 2           | 3           | 4           | 5           |

|   |  |   |   |   |   |   |
|---|--|---|---|---|---|---|
| Did /do your children have the opportunity to go to school?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with the access and quality of education they have received? | 1 | 2 | 3 | 4 | 5 |
| Do you have access to social security benefits? (e.g. free or subsidized medical support, child support, education support from the State, pension)<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/> If no -->    N.A  | How satisfied are you with it?   | 1 | 2 | 3 | 4 | 5 |
| What kind of Access to Information do you have?<br>a. Public-library <input type="checkbox"/><br>b. Private- Newspaper, Television <input type="checkbox"/><br>c. Radio <input type="checkbox"/><br>d. Any other <input type="checkbox"/>                                       | How satisfied are you with your access?  | 1 | 2 | 3 | 4 | 5 |
| Do you have access to any sports facilities? (playground, fields, etc)  | How satisfied are you with your access?  | 1 | 2 | 3 | 4 | 5 |
| Do you feel physically safe in the village? (i.e. free from crime or the threat of crime ) (√ Below)<br>1. All the time <input type="checkbox"/><br>2. Most of the time <input type="checkbox"/><br>3. Some times <input type="checkbox"/><br>4. Never <input type="checkbox"/> | How satisfied are you with this sense of being safe?                               | 1 | 2 | 3 | 4 | 5 |
| Is there alcoholism within your family?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/> 3. A little <input type="checkbox"/>  | How satisfied are you with the situation?  | 1 | 2 | 3 | 4 | 5 |
| Are you able to avail of a house (shelter)?<br>1. Buy <input type="checkbox"/> 2. Rent <input type="checkbox"/> 3. Squat <input type="checkbox"/> 4. Own <input type="checkbox"/>   | How satisfied are you with the situation you find yourself in relation to this?    | 1 | 2 | 3 | 4 | 5 |
| What is the kind of sanitation facility available to you?<br>1. No toilet <input type="checkbox"/> 2. At home <input type="checkbox"/> 3. Public toilet <input type="checkbox"/> 4. Any other <input type="checkbox"/>  | How satisfied are you with the kind of facilities available to you?                | 1 | 2 | 3 | 4 | 5 |

Political

| Descriptive indicators   | Evaluative Indicators  |            |            |            |            |            |
|--|--|------------|------------|------------|------------|------------|
| Do you participate in decision making/ planning/Implementing in any or all of the below? (√ Below)<br>a. Household level <input type="checkbox"/><br>b. Village/municipal level <input type="checkbox"/> | How satisfied are you with it?<br><br>How satisfied are you with it? | 1<br><br>1 | 2<br><br>2 | 3<br><br>3 | 4<br><br>4 | 5<br><br>5 |

|   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
| How are you engaged in civic life? (✓ Below)  | How satisfied are you with your engagement?       | 1 | 2 | 3 | 4 | 5 |
| a. By voting <input type="checkbox"/>   | How satisfied are you with the election process?  | 1 | 2 | 3 | 4 | 5 |
| b. By being part of a cooperative society <input type="checkbox"/>  | How satisfied are you with your engagement?       | 1 | 2 | 3 | 4 | 5 |
| c. Making demands of public services <input type="checkbox"/>   | How satisfied are you with your engagement?       | 1 | 2 | 3 | 4 | 5 |
| d. By running for a public position/standing for election <input type="checkbox"/>  | How satisfied are you with your engagement?       | 1 | 2 | 3 | 4 | 5 |
| What are the mechanisms you use or support to resolve conflict? (Courts, police, <i>panchayat</i> )<br>List   | How satisfied are you with them?                  | 1 | 2 | 3 | 4 | 5 |
| Do you support the use of traditional ways to prevent & resolve conflict (family, other informal groups, religious heads)<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/> | How satisfied are you with them?                  | 1 | 2 | 3 | 4 | 5 |
| Do you use any of the facilities offered by the government? (Starting new ventures/subsidies, support)<br>List  | How satisfied are you with them?                  | 1 | 2 | 3 | 4 | 5 |
| Do you participate in local politics?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with your participation?    | 1 | 2 | 3 | 4 | 5 |
| Are you involved in monitoring critical issues in your village?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with your participation?    | 1 | 2 | 3 | 4 | 5 |
| Do you find that there is enforcement of rules by government bodies?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with this rule enforcement? | 1 | 2 | 3 | 4 | 5 |
| Do you think there is use/misuse of authority in Goa in general?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with the situation?         | 1 | 2 | 3 | 4 | 5 |
| Do you find the following in your dealings with Government? (✓ As appropriate)  | How satisfied are you with regard to it?          |   |   |   |   |   |
| a. Honesty <input type="checkbox"/>   |   | 1 | 2 | 3 | 4 | 5 |
| b. Stability <input type="checkbox"/>   |   | 1 | 2 | 3 | 4 | 5 |
| c. Accountability <input type="checkbox"/>  |   | 1 | 2 | 3 | 4 | 5 |

|   |                                  |   |   |   |   |   |
|---|----------------------------------|---|---|---|---|---|
| Do you find you are able to express your opinions about the regime of the day?<br>1.Yes <input type="checkbox"/> 2. No <input type="checkbox"/> | How satisfied are you with this? | 1 | 2 | 3 | 4 | 5 |
| Do you feel you know your legal rights?<br>1.Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with this? | 1 | 2 | 3 | 4 | 5 |
| Do you have access to legal aid if you need it?<br>1.Yes <input type="checkbox"/> 2. No <input type="checkbox"/>                                | How satisfied are you with this? | 1 | 2 | 3 | 4 | 5 |
| Can you afford legal aid if you were to need it?<br>1.Yes <input type="checkbox"/> 2. No <input type="checkbox"/>                               | How satisfied are you with this? | 1 | 2 | 3 | 4 | 5 |
| Are you aware of your political rights? (Right to free speech, view)<br>1.Yes <input type="checkbox"/> 2. No <input type="checkbox"/>           | How satisfied are you with this? | 1 | 2 | 3 | 4 | 5 |

| Biophysical   |                                  |   |   |   |   |   |
|---|----------------------------------|---|---|---|---|---|
| Descriptive Indicators  | Evaluative Indicators            |   |   |   |   |   |
| How would you describe the air quality that you are faced with in your daily life?<br>V Bad <input type="checkbox"/> ; Bad <input type="checkbox"/> ; Fair <input type="checkbox"/> ; Good <input type="checkbox"/> ; V. Good <input type="checkbox"/>                | How satisfied are you with this? | 1 | 2 | 3 | 4 | 5 |
| How would you describe the water quality for drinking that you are faced with in your daily life?<br>V Bad <input type="checkbox"/> ; Bad <input type="checkbox"/> ; Fair <input type="checkbox"/> ; Good <input type="checkbox"/> ; V. Good <input type="checkbox"/> | How satisfied are you with this? | 1 | 2 | 3 | 4 | 5 |
| How would you describe the water quality for other purposes in your daily life?<br>V Bad <input type="checkbox"/> ; Bad <input type="checkbox"/> ; Fair <input type="checkbox"/> ; Good <input type="checkbox"/> ; V. Good <input type="checkbox"/>                   | How satisfied are you with this? | 1 | 2 | 3 | 4 | 5 |
| How far do you need to go for drinking water?<br>Within house <input type="checkbox"/><br>Within 100 m <input type="checkbox"/><br>Within 200 m <input type="checkbox"/><br>Within 1 km <input type="checkbox"/><br>> 1 km <input type="checkbox"/>                   | How satisfied are you with this? | 1 | 2 | 3 | 4 | 5 |
| Do you have easy availability of water for other purposes?<br>Within house <input type="checkbox"/><br>Within 100 m <input type="checkbox"/><br>Within 200 m <input type="checkbox"/><br>Within 1 km <input type="checkbox"/><br>> 1 km <input type="checkbox"/>      | How satisfied are you with this? | 1 | 2 | 3 | 4 | 5 |
| Are you free from noise (loud & constant)?<br>1.Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with this? | 1 | 2 | 3 | 4 | 5 |

|  |   |   |   |   |   |   |
|--|---|---|---|---|---|---|
| Is the place you live in free from vibrations?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with this?                  | 1 | 2 | 3 | 4 | 5 |
| How much land (to cultivate, for pasture) do you have?<br>(In ha)  | How satisfied are you with this?                  | 1 | 2 | 3 | 4 | 5 |
| How would you describe the quality of the land you have to cultivate and maintain animals?<br>V Bad <input type="checkbox"/> ; Bad <input type="checkbox"/> ; Fair <input type="checkbox"/> ; Good <input type="checkbox"/> ; V. Good <input type="checkbox"/> | How satisfied are you with this?                  | 1 | 2 | 3 | 4 | 5 |
| Are there any plants and animals in the area you live in?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with this?                  | 1 | 2 | 3 | 4 | 5 |
| Are you concerned for the (poor health)/well-being of animals, plants /nature in your surroundings?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with their state of health? | 1 | 2 | 3 | 4 | 5 |
| How would you describe the changes in the natural landscape around you?<br>V Bad <input type="checkbox"/> ; Bad <input type="checkbox"/> ; Fair <input type="checkbox"/> ; Good <input type="checkbox"/> ; V. Good <input type="checkbox"/>                    | How satisfied are you with this?                  | 1 | 2 | 3 | 4 | 5 |
| Do you feel exposed to the occurrence of calamities like floods, droughts, landslides, etc? (√ Below)<br>Continuously <input type="checkbox"/><br>Periodically in monsoons <input type="checkbox"/><br>Rarely <input type="checkbox"/>                         | How satisfied are you with this state?            | 1 | 2 | 3 | 4 | 5 |
| Is the place (you work/live) clean?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with this?                  | 1 | 2 | 3 | 4 | 5 |
| Is the place you work and live accident free? (Vehicular)<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with this?                  | 1 | 2 | 3 | 4 | 5 |
| Are there any open/green spaces around the place you work?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/><br>You live?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with this?                  | 1 | 2 | 3 | 4 | 5 |

**Biomedical**

|   |  |   |   |   |   |   |
|---|--|---|---|---|---|---|
| Is there a family welfare centre?<br>(Located within 10 kms radius)<br>1 Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with this?             | 1 | 2 | 3 | 4 | 5 |
| Are there any maternity clinics/child care centres? (Within 10 kms radius)<br>1 Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with this?             | 1 | 2 | 3 | 4 | 5 |
| Are there any respiratory disorder clinics? (Within 10 kms radius)<br>1 Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with this?             | 1 | 2 | 3 | 4 | 5 |
| Are there any dental clinics?<br>1 Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  |  | 1 | 2 | 3 | 4 | 5 |
| Are there any primary health care facilities? (Within 5 kms radius)<br>1 Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with it?               | 1 | 2 | 3 | 4 | 5 |
| How would you describe the quality of health care facilities? (E.g. to have facilities with qualified nurses, regular physician visits, sufficient and clean equipment)<br>V Bad <input type="checkbox"/> ; Bad <input type="checkbox"/> ; Fair <input type="checkbox"/> ; Good <input type="checkbox"/> ; V. Good <input type="checkbox"/> | How satisfied are you with it?               | 1 | 2 | 3 | 4 | 5 |
| Is there any alternative or traditional medical system available to you?<br>1 Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | If yes, how satisfied are you with this?     | 1 | 2 | 3 | 4 | 5 |
| Do you have any of the following?<br>(Tick) below<br>1) Medical insurance (either public <input type="checkbox"/> / private <input type="checkbox"/><br>2) Medical coverage <input type="checkbox"/>  | If yes, how satisfied are you with it?       | 1 | 2 | 3 | 4 | 5 |
| Do you find medicines that you need easily available here?<br>1 Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with the availability? | 1 | 2 | 3 | 4 | 5 |
| How much do you spend on medicines per month?   | How satisfied are you with this expenditure? | 1 | 2 | 3 | 4 | 5 |
| Do you or your family use any of the immunisation programmes available?<br>1 Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with it?               | 1 | 2 | 3 | 4 | 5 |

|  |  |   |   |   |   |   |
|--|--|---|---|---|---|---|
| Can you afford any of the Immunisation programmes not supported by the government?<br>1 Yes <input type="checkbox"/> 2. No <input type="checkbox"/>                        | How satisfied are you with the situation?                    | 1 | 2 | 3 | 4 | 5 |
| How much do you spend on regular health check ups?   |  | 1 | 2 | 3 | 4 | 5 |
| Do you use first aid facilities?<br>1 Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with it?                               | 1 | 2 | 3 | 4 | 5 |
| Do you get enough sleep/rest? (To have adequate ...sufficient stamina to carry out your daily activities)<br>1 Yes <input type="checkbox"/> 2. No <input type="checkbox"/> | How satisfied are you with it?                               | 1 | 2 | 3 | 4 | 5 |
| Do you have good appetite and digestion?<br>1 Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with it?                               | 1 | 2 | 3 | 4 | 5 |
| Do you have good reproductive health/fertility?<br>1 Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with it?                               | 1 | 2 | 3 | 4 | 5 |
| Are you able to experience emotional compatibility with those important to you?<br>1 Yes <input type="checkbox"/> 2. No <input type="checkbox"/>                           | How satisfied are you with it?                               | 1 | 2 | 3 | 4 | 5 |
| Do you have vigour and stamina?<br>1 Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with it?                               | 1 | 2 | 3 | 4 | 5 |
| Do you have self -confidence/self-respect?<br>1 Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with it?                               | 1 | 2 | 3 | 4 | 5 |
| Do you depend on medicines (In order to be able to undertake your daily activities?)<br>1 Yes <input type="checkbox"/> 2. No <input type="checkbox"/>                      | How satisfied are you with it?                               | 1 | 2 | 3 | 4 | 5 |
| Does your work involve health and safety risks?<br>1 Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with the situation you are faced with? | 1 | 2 | 3 | 4 | 5 |
| Till what age do people in your family live on the average?<br>< 50 <input type="checkbox"/><br>50-75 <input type="checkbox"/><br>>75 <input type="checkbox"/>             |  | 1 | 2 | 3 | 4 | 5 |

|  |   |   |   |   |   |   |
|--|---|---|---|---|---|---|
| Is there any physical/mental disability in the family?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>     | How satisfied are you?                          | 1 | 2 | 3 | 4 | 5 |
| Are you free from depression, mental stress, anxiety etc.?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/> | How satisfied are you with your life situation? | 1 | 2 | 3 | 4 | 5 |
| Is there illness in the family?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>                            | How satisfied are you with it?                  | 1 | 2 | 3 | 4 | 5 |

Spiritual

| Descriptive Indicators   | Evaluative Indicators                            |   |   |   |   |   |
|--|--|---|---|---|---|---|
| What is the level of spirituality/religion in your life?<br>1. High <input type="checkbox"/> 2. Medium <input type="checkbox"/> 3. Low <input type="checkbox"/> 4. None <input type="checkbox"/> | How satisfied are you with it?                   | 1 | 2 | 3 | 4 | 5 |
| Do you believe in customs and traditions/rituals?<br>Yes <input type="checkbox"/> No <input type="checkbox"/> Somewhat <input type="checkbox"/>  | How satisfied are you with it?                   | 1 | 2 | 3 | 4 | 5 |
| Are you involved in festivals and religious ceremonies?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with it?                   | 1 | 2 | 3 | 4 | 5 |
| Do you have strong personal beliefs?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with it?                   | 1 | 2 | 3 | 4 | 5 |
| Is there a place of worship close by?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with it?                   | 1 | 2 | 3 | 4 | 5 |
| Do you believe in God?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with your level of belief? | 1 | 2 | 3 | 4 | 5 |



**QOL SURVEY INSTRUMENT (version II)**

Respondent No.

|     |   |                  |
|-----|---|------------------|
| 1.  | Do you live in this village?  | (Village Name: ) |
| 2.  | How many years have you lived here?   |                  |
| 3.  | Place of work (outside the village/in the village)  |                  |
| 4.  | Age   |                  |
| 5.  | Marital status  |                  |
| 6.  | Gender  |                  |
| 7.  | Number of people at home  |                  |
| 8.  | Number of people you support economically   |                  |
| 9.  | Number of rooms in your house   |                  |
| 10. | Family type (joint/nuclear)   |                  |
| 11. | Has there been any death (not due to old age) recently at home?   |                  |
| 12. | Are there any major problems at your community (for example, a lot of robbery/village conflict or group wars) |                  |

| INTRODUCTORY QUESTIONS                                       | Very dissatisfied | Dissatisfied | Neither dissatisfied nor satisfied | Satisfied | Very satisfied |
|--|-------------------|--------------|------------------------------------|-----------|----------------|
| In general, how satisfied are you with your health?          | 1                 | 2            | 3                                  | 4         | 5              |
| In general, how satisfied are you with your quality of life? | 1                 | 2            | 3                                  | 4         | 5              |

| ECONOMIC   |   |                   |              |                                    |           |                |
|--|---|-------------------|--------------|------------------------------------|-----------|----------------|
| Descriptive<br>(Respondent is asked to describe his/her resources and life conditions)   | Evaluative<br>(Respondent is asked to evaluate their satisfaction with life his/her conditions) | Very dissatisfied | Dissatisfied | Neither dissatisfied nor satisfied | Satisfied | Very satisfied |
| What is your main occupation?  | How satisfied are you with this occupation?   | 1                 | 2            | 3                                  | 4         | 5              |
| Do you have a regular job?<br>(> 6 m/yr)<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | If yes, how satisfied are you with it?  | 1                 | 2            | 3                                  | 4         | 5              |
| Is your job secure?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with the level of security?   | 1                 | 2            | 3                                  | 4         | 5              |
| What is your monthly wage or salary?   | How satisfied are you with your monthly wages/salary?   | 1                 | 2            | 3                                  | 4         | 5              |
| What is the average income of your household?<br>(Per month)   | How satisfied are you with the household income?  | 1                 | 2            | 3                                  | 4         | 5              |
| Would you be able to meet unforeseen expenses of up to (insert appropriate amount) within a week? (From bank, kin, etc.)<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/> | How satisfied are you with this situation?  | 1                 | 2            | 3                                  | 4         | 5              |
| What material assets do you own? (Jewellery, cattle, land)<br>List:  | How satisfied are you with the amount of assets that you own?                                   | 1                 | 2            | 3                                  | 4         | 5              |
| In what other ways do you support yourself and your family economically?<br>List:  | How satisfied are you with these means to support you and your family?                          | 1                 | 2            | 3                                  | 4         | 5              |
| Do you have access to employment training programmes? (From the government or from an employer etc.)<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>                     | How satisfied are you with the employment training programmes?                                  | 1                 | 2            | 3                                  | 4         | 5              |
| Is your family able to have enough to eat in a day?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/><br>3. Sometimes <input type="checkbox"/>                             | How satisfied are you with the nutritional value of the food that your household consumes?      | 1                 | 2            | 3                                  | 4         | 5              |
| How much do you spend on food per month?   | How satisfied are you with the affordability?   | 1                 | 2            | 3                                  | 4         | 5              |
| Do you have access to postal services (postal, email, telegraph)?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with the services?  | 1                 | 2            | 3                                  | 4         | 5              |
| Do you have the use of electricity in your home?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with the electricity services?  | 1                 | 2            | 3                                  | 4         | 5              |

|  |  |   |   |   |   |   |
|--|--|---|---|---|---|---|
| How much do you spend on electricity/month?  | How satisfied are you with the affordability?                                  | 1 | 2 | 3 | 4 | 5 |
| Do you use a telephone?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/><br>( √ below)<br>a. Public telephone <input type="checkbox"/><br>b. At home (land phone) <input type="checkbox"/><br>c. Mobile / Cell Phone <input type="checkbox"/> | How satisfied are you with the availability of a telephone?                    | 1 | 2 | 3 | 4 | 5 |
| Can you afford a telephone/mobile phone at home?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with the affordability of your telephone?                | 1 | 2 | 3 | 4 | 5 |
| Do you use a public or private transport system?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with the transport system?                               | 1 | 2 | 3 | 4 | 5 |
| How much do you spend on transport each month?   | How satisfied are you with the affordability?                                  | 1 | 2 | 3 | 4 | 5 |
| Do you have any livestock? (Such as cows, goats, chicken)<br>List number per type:   | If yes, are you satisfied with the livestock that you have?                    | 1 | 2 | 3 | 4 | 5 |
| Do you have places to water and pasture livestock?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with the availability of watering holes and pastureland? | 1 | 2 | 3 | 4 | 5 |
| Annual average/monthly income from livestock rearing (average)   | How satisfied are you with it?   | 1 | 2 | 3 | 4 | 5 |
| Do you fish in inland or coastal waters?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/><br>3. N/A <input type="checkbox"/>  | How satisfied are you with it?   | 1 | 2 | 3 | 4 | 5 |
| What amenities (such as cars, TV, videos, telephone, fridge, radio) do you have?<br>List:  | How satisfied are you with them?   | 1 | 2 | 3 | 4 | 5 |

| SOCIAL   |  |                   |              |                                    |           |                |
|--|--|-------------------|--------------|------------------------------------|-----------|----------------|
| Descriptive<br>(Respondent is asked to describe his/her resources and conditions)  | Evaluative<br>(Respondent is asked to evaluate (In terms of satisfaction) his/her conditions)<br>Scale of satisfaction | Very dissatisfied | Dissatisfied | Neither dissatisfied nor satisfied | Satisfied | Very satisfied |
| Do you have the social or emotional support of your extended family and/or friends?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/><br>3. Sometimes <input type="checkbox"/> | How satisfied are you with your situation?   | 1                 | 2            | 3                                  | 4         | 5              |

|   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
| Do you have a good family life?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/><br>3. Sometimes <input type="checkbox"/>  | How satisfied are you with your family life?  | 1 | 2 | 3 | 4 | 5 |
| Do you have good relations with relatives?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/><br>3. Sometimes <input type="checkbox"/>   | How satisfied are you with the relations with your relatives?                         | 1 | 2 | 3 | 4 | 5 |
| Do you have a community life?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with this situation?  | 1 | 2 | 3 | 4 | 5 |
| Did/do you have a choice in matters regarding marriage?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/><br>3. Restricted <input type="checkbox"/>   | How satisfied are you with the degree of freedom?                                     | 1 | 2 | 3 | 4 | 5 |
| Did/do you have a choice regarding the number and spacing of Children?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/><br>3. Restricted <input type="checkbox"/>  | How satisfied are you with your degree of freedom?                                    | 1 | 2 | 3 | 4 | 5 |
| Are you able to express solidarity with others?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with this situation?  | 1 | 2 | 3 | 4 | 5 |
| Generally, do you have opportunities/access to learn new skills and/or develop old skills?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with the opportunity to learn new skills or develop old skills? | 1 | 2 | 3 | 4 | 5 |
| What educational qualification or level have you achieved?<br>(✓ Below: as many as apply)<br>1. None <input type="checkbox"/><br>2. Primary level <input type="checkbox"/><br>3. Secondary level <input type="checkbox"/><br>4. Post secondary level (university) <input type="checkbox"/><br>5. Vocational/technical training <input type="checkbox"/> | How satisfied are you with the amount of education that you've had?                   | 1 | 2 | 3 | 4 | 5 |
| Did/do your children have the opportunity to go to school?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with their education?   | 1 | 2 | 3 | 4 | 5 |
| Do you have access to government or social security benefits? (E.g. free/subsidized medical support, child support, from the government, pension etc. )<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/><br>3. Don't know <input type="checkbox"/>   | How satisfied are you with this situation?  | 1 | 2 | 3 | 4 | 5 |

|  |   |   |   |   |   |   |
|--|---|---|---|---|---|---|
| What kind of access to information do you have?<br>1. Public -library <input type="checkbox"/><br>2. Private - Newspaper, Television <input type="checkbox"/><br>3. Radio <input type="checkbox"/><br>4. Any other <input type="checkbox"/>                                    | How satisfied are you with your access?   | 1 | 2 | 3 | 4 | 5 |
| Do you /your family have access to any sports facilities? (playground, fields, etc.)<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with their accessibility?                                 | 1 | 2 | 3 | 4 | 5 |
| Do you feel physically safe in the village? (i.e. free from crime or the threat of crime)<br>(√ Below)<br>1.All the time <input type="checkbox"/><br>2.Most of the time <input type="checkbox"/><br>3.Some times <input type="checkbox"/><br>4. Never <input type="checkbox"/> | How satisfied are you with this sense of being safe?                            | 1 | 2 | 3 | 4 | 5 |
| Is there any alcoholism within your family?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/><br>3. A little <input type="checkbox"/>  | How satisfied are you with the situation?                                       | 1 | 2 | 3 | 4 | 5 |
| Are you able to use a house (shelter)?<br>1. Squat (temporary) <input type="checkbox"/><br>2. Rent <input type="checkbox"/><br>3. Own home <input type="checkbox"/>  | How satisfied are you with the situation you find yourself in relation to this? | 1 | 2 | 3 | 4 | 5 |
| What is the kind of sanitation facility available to you?<br>1. No toilet <input type="checkbox"/><br>2. Public toilet <input type="checkbox"/><br>3. At home <input type="checkbox"/><br>4. Any other <input type="checkbox"/>  | How satisfied are you with the kind of facilities available to you?             | 1 | 2 | 3 | 4 | 5 |

| POLITICAL   |  |                   |              |                                    |           |                |
|---|--|-------------------|--------------|------------------------------------|-----------|----------------|
| Descriptive<br>(Respondent is asked to describe his/her resources and conditions)   | Evaluative<br>(Respondent is asked to evaluate (in terms of satisfaction) his/her conditions)<br>Scale of satisfaction | Very dissatisfied | Dissatisfied | Neither dissatisfied nor satisfied | Satisfied | Very satisfied |
| Do you participate in decision making in the household level?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/> | How satisfied are you with your amount of participation?   | 1                 | 2            | 3                                  | 4         | 5              |

|  |  |   |   |   |   |   |
|--|--|---|---|---|---|---|
| <p>Do you participate in decision making in the village/community level?</p> <p>1. Yes <input type="checkbox"/>      2. No <input type="checkbox"/></p>  | <p>How satisfied are you with your amount of participation?</p>                        | 1 | 2 | 3 | 4 | 5 |
| <p>How are you engaged in civic/community life? (✓ Below)</p> <p>1. Do you vote <input type="checkbox"/></p> <p>2. Making demands of public services <input type="checkbox"/></p> <p>3. Have you run for/been in an elected or appointed public position <input type="checkbox"/></p> <p>4. None of above <input type="checkbox"/></p> | <p>How satisfied are you with your engagement?</p>                                     | 1 | 2 | 3 | 4 | 5 |
| <p>What are the mechanisms you use or support to resolve conflict? (Formal – courts, police, Informal – traditional etc.)</p> <p>List:</p>   | <p>How satisfied are you with the formal mechanisms?</p>                               | 1 | 2 | 3 | 4 | 5 |
| <p>Do you support the use of traditional ways to prevent &amp; resolve conflict (family, other informal groups, religious heads)</p> <p>1.Yes <input type="checkbox"/>      2. No <input type="checkbox"/></p>   | <p>How satisfied are you with the Informal / traditional ways to resolve conflict?</p> | 1 | 2 | 3 | 4 | 5 |
| <p>Do you participate in local politics?</p> <p>1.Yes <input type="checkbox"/>      2. No <input type="checkbox"/></p>   | <p>How satisfied are you with your participation?</p>                                  | 1 | 2 | 3 | 4 | 5 |
| <p>Are you involved in monitoring critical issues in your village?</p> <p>1.Yes <input type="checkbox"/>      2. No <input type="checkbox"/></p>   | <p>How satisfied are you with your involvement?</p>                                    | 1 | 2 | 3 | 4 | 5 |
| <p>Do you find that government bodies enforce the rules of law? (For example, the police, courts, administrators etc.)</p> <p>1.Yes <input type="checkbox"/>      2. No <input type="checkbox"/></p> <p>3. Sometimes I I</p>   | <p>How satisfied are you with this situation?</p>                                      | 1 | 2 | 3 | 4 | 5 |
| <p>Do you think there is good use of authority in (insert country's name) in general?</p> <p>1.Yes I I      2. No I I</p>  | <p>How satisfied are you with the situation?</p>                                       | 1 | 2 | 3 | 4 | 5 |
| <p>Do you find the following in your dealings with Government? (✓ As appropriate)</p> <p>1. Honest <input type="checkbox"/></p> <p>2. Stable/consistent <input type="checkbox"/></p> <p>3. Accountable <input type="checkbox"/></p> <p>4. None of the above <input type="checkbox"/></p>   | <p>In general, how satisfied are you with regard to your government dealings?</p>      | 1 | 2 | 3 | 4 | 5 |
| <p>Do you find you are able to express your opinions about the government /regime of the day?</p> <p>1.Yes <input type="checkbox"/>      2. No <input type="checkbox"/></p>  | <p>How satisfied are you with this degree of freedom of expression?</p>                | 1 | 2 | 3 | 4 | 5 |

|   |  |   |   |   |   |   |
|---|--|---|---|---|---|---|
| Do you feel you know your legal rights?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/><br>3. Some of them <input type="checkbox"/><br>For example: Do you know that you cannot own land? | How satisfied are you with your level of awareness of your legal rights?     | 1 | 2 | 3 | 4 | 5 |
| Do you have access to legal aid if you need it?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with this situation?                                   | 1 | 2 | 3 | 4 | 5 |
| Can you afford legal aid or a lawyer if you were to need it?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with this situation?                                   | 1 | 2 | 3 | 4 | 5 |
| Are you aware of your political rights? (Right to free speech, right to vote)<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/><br>3. Some of them <input type="checkbox"/>                 | How satisfied are you with your level of awareness of your political rights? | 1 | 2 | 3 | 4 | 5 |

| BIOPHYSICAL   |  |                   |              |                                    |           |                |
|---|--|-------------------|--------------|------------------------------------|-----------|----------------|
| <b>Descriptive</b><br><i>(Respondent is asked to describe his/her resources and conditions)</i>   | <b>Evaluative</b><br><i>(Respondent is asked to evaluate (in terms of satisfaction) his/her condltions)</i><br>Scale of satisfaction | Very dissatisfied | Dissatisfied | Neither dissatisfied nor satisfied | Satisfied | Very satisfied |
| How would you describe the air quality that you are faced with in your daily life?<br><br>1. V. Bad <input type="checkbox"/> 2. Bad <input type="checkbox"/><br>3. Fair <input type="checkbox"/> 4. Good <input type="checkbox"/><br>5. V. Good <input type="checkbox"/>                | How satisfied are you with this situation?   | 1                 | 2            | 3                                  | 4         | 5              |
| What is your source of water?<br>1. Bore hole/well <input type="checkbox"/><br>2. Public Utility <input type="checkbox"/><br>3. Private company <input type="checkbox"/>  | How satisfied are you with the availability of water?  | 1                 | 2            | 3                                  | 4         | 5              |
| How would you describe the water quality for drinking that you are faced with in your daily life?<br><br>1. V. Bad <input type="checkbox"/> 2. Bad <input type="checkbox"/><br>3. Fair <input type="checkbox"/> 4. Good <input type="checkbox"/><br>5. V. Good <input type="checkbox"/> | How satisfied are you with this situation?   | 1                 | 2            | 3                                  | 4         | 5              |

|   |  |   |   |   |   |   |
|---|--|---|---|---|---|---|
| <p>How far do you need to go for drinking water?</p> <p>1. In house <input type="checkbox"/></p> <p>2. Within 100 m <input type="checkbox"/></p> <p>3. Within 200 m <input type="checkbox"/></p> <p>4. Within 1 km <input type="checkbox"/></p> <p>5. &gt; 1 km <input type="checkbox"/></p>                        | How satisfied are you with this situation? | 1 | 2 | 3 | 4 | 5 |
| <p>Do you have easy availability of water for other purposes?</p> <p>1. In house <input type="checkbox"/></p> <p>2. Within 100 m <input type="checkbox"/></p> <p>3. Within 200 m <input type="checkbox"/></p> <p>4. Within 1 km <input type="checkbox"/></p> <p>5. &gt; 1 km <input type="checkbox"/></p>           | How satisfied are you with this situation? | 1 | 2 | 3 | 4 | 5 |
| <p>Are you free from noise in your day-to-day life (loud &amp; constant)?</p> <p>1. Yes <input type="checkbox"/>      2. No <input type="checkbox"/></p>  | How satisfied are you with this situation? | 1 | 2 | 3 | 4 | 5 |
| <p>Is the place you live in free from vibrations from man-made sources? (From blasting, large trucks etc.)</p> <p>1. Yes <input type="checkbox"/>      2. No <input type="checkbox"/></p>   | How satisfied are you with this situation? | 1 | 2 | 3 | 4 | 5 |
| <p>How much land (to cultivate, for pasture) do you have?</p> <p>(In ha)</p>  | How satisfied are you with the amount?     | 1 | 2 | 3 | 4 | 5 |
| <p>How would you describe the quality of the land you have to cultivate and maintain animals?</p> <p>1. V Bad <input type="checkbox"/> 2. Bad <input type="checkbox"/></p> <p>3. Fair <input type="checkbox"/> 4. Good <input type="checkbox"/></p> <p>5. V. Good <input type="checkbox"/></p>                      | How satisfied are you with this?           | 1 | 2 | 3 | 4 | 5 |
| <p>How would you describe the changes in the natural landscape around you?</p> <p>1. No Changes <input type="checkbox"/> 2. V. Bad <input type="checkbox"/></p> <p>3. Bad <input type="checkbox"/> 4. Fair <input type="checkbox"/> 5. Good <input type="checkbox"/></p> <p>6. V. Good <input type="checkbox"/></p> | How satisfied are you with these changes?  | 1 | 2 | 3 | 4 | 5 |
| <p>Do you feel exposed to the occurrence of calamities like floods, droughts, landslides, etc? (✓ Below)</p> <p>1. Continuously <input type="checkbox"/></p> <p>2. Periodically in rains/monsoons <input type="checkbox"/></p> <p>3. Rarely <input type="checkbox"/></p>  | How satisfied are you with this state?     | 1 | 2 | 3 | 4 | 5 |



|  |                                  |   |   |   |   |   |
|--|----------------------------------|---|---|---|---|---|
| In general, is your village/community area clean?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>                | How satisfied are you with this? | 1 | 2 | 3 | 4 | 5 |
| Is the place you work and live free from car/truck accidents?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>    | How satisfied are you with this? | 1 | 2 | 3 | 4 | 5 |
| Are there any open/green spaces around the place you work?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>       | How satisfied are you with this? | 1 | 2 | 3 | 4 | 5 |
| Are there any open/green spaces around the place where you live?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/> | How satisfied are you with this? | 1 | 2 | 3 | 4 | 5 |

| BIOMEDICAL  |   |                   |              |                                    |           |                |
|---|---|-------------------|--------------|------------------------------------|-----------|----------------|
| Descriptive<br>(Respondent is asked to describe his/her resources and conditions)   | Evaluative<br>(Respondent is asked to evaluate (in terms of satisfaction) his/her conditions) | Very dissatisfied | Dissatisfied | Neither dissatisfied nor satisfied | Satisfied | Very satisfied |
| Is there any health clinic located within 10 kms radius?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with its closeness?   | 1                 | 2            | 3                                  | 4         | 5              |
| Is there any maternity clinic? (Within 10 kms radius)<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with its closeness?   | 1                 | 2            | 3                                  | 4         | 5              |
| Are there any dental clinics?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with the availability of dental services?                               | 1                 | 2            | 3                                  | 4         | 5              |
| How would you describe the quality of health care facilities? (E.g. to have facilities with qualified nurses, regular physician visits, sufficient and clean equipment)<br>1. V. Bad <input type="checkbox"/> 2. Bad <input type="checkbox"/><br>3. Fair <input type="checkbox"/> 4. Good <input type="checkbox"/><br>5. V. Good <input type="checkbox"/> | How satisfied are you with the centre's quality?  | 1                 | 2            | 3                                  | 4         | 5              |
| Do you have to pay for your medical services?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | If yes, how satisfied are you with the affordability of the medical services?                 | 1                 | 2            | 3                                  | 4         | 5              |
| Is there any alternative or traditional medical system available to you?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | If yes, how satisfied are you with this?  | 1                 | 2            | 3                                  | 4         | 5              |
| Do you find that the modern pharmaceutical medicines that you need are easily available?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with the availability?  | 1                 | 2            | 3                                  | 4         | 5              |

|  |  |   |   |   |   |   |
|--|--|---|---|---|---|---|
| <p>Do you find that the traditional medicines that you need are easily available?</p> <p>1. Yes <input type="checkbox"/>      2. No <input type="checkbox"/></p> <p>3. N/A <input type="checkbox"/></p>                          | How satisfied are you with the availability?                                   | 1 | 2 | 3 | 4 | 5 |
| How much do you spend on medicines per month?  | How satisfied are you with this expense/cost?                                  | 1 | 2 | 3 | 4 | 5 |
| Do you or your family use any of the immunization programmes available?  | How satisfied are you with their availability?                                 | 1 | 2 | 3 | 4 | 5 |
| <p>Generally, do you get enough sleep?</p> <p>1. Yes <input type="checkbox"/>      2. No <input type="checkbox"/></p>  | How satisfied are you with the amount of sleep/rest you get?                   | 1 | 2 | 3 | 4 | 5 |
| <p>Do you have good appetite and digestion?</p> <p>1. Yes <input type="checkbox"/>      2. No <input type="checkbox"/></p>   | How satisfied are you with your appetite?                                      | 1 | 2 | 3 | 4 | 5 |
| <p>Do you have good reproductive health /fertility?</p> <p>1. Yes <input type="checkbox"/>      2. No <input type="checkbox"/></p>   | How satisfied are you with it?   | 1 | 2 | 3 | 4 | 5 |
| <p>Are you able to experience emotional compatibility with those important to you?</p> <p>1. Yes <input type="checkbox"/>      2. No <input type="checkbox"/></p>  | How satisfied are you with this situation?                                     | 1 | 2 | 3 | 4 | 5 |
| <p>Do you have enough energy to carry out your day-to-day activities?</p> <p>1. Yes <input type="checkbox"/>      2. No <input type="checkbox"/></p>   | How satisfied are you with your amount of daily energy?                        | 1 | 2 | 3 | 4 | 5 |
| <p>Do you have self-confidence/self-respect?</p> <p>1. Yes <input type="checkbox"/>      2. No <input type="checkbox"/></p>  | How satisfied are you with your level of confidence?                           | 1 | 2 | 3 | 4 | 5 |
| <p>Do you depend on medicines (In order to be able to undertake your daily activities?)</p> <p>1 Yes <input type="checkbox"/>      2. No <input type="checkbox"/></p>  | How satisfied are you with this situation?                                     | 1 | 2 | 3 | 4 | 5 |
| <p>Do you depend on medicinal plants (In order to be able to undertake your daily activities?)</p> <p>1 Yes <input type="checkbox"/>      2. No <input type="checkbox"/></p>   | How satisfied are you with this situation?                                     | 1 | 2 | 3 | 4 | 5 |
| <p>Do you have good physical health?</p> <p>1. Yes <input type="checkbox"/>      2. No <input type="checkbox"/></p>  | How satisfied are you with your physical health?                               | 1 | 2 | 3 | 4 | 5 |
| <p>Does your work involve health and safety risks?</p> <p>1. Yes <input type="checkbox"/>      2. No <input type="checkbox"/></p>  | How satisfied are you with the health and safety situation you are faced with? | 1 | 2 | 3 | 4 | 5 |
| <p>What age do people in your family generally live?</p> <p>1.&lt; 50 <input type="checkbox"/></p> <p>2.50 - 75 <input type="checkbox"/></p> <p>3.&gt;75 <input type="checkbox"/></p>  | How satisfied are you with this situation?                                     | 1 | 2 | 3 | 4 | 5 |
| <p>Have all of your children survived?</p> <p>1. 0 dead <input type="checkbox"/></p> <p>2. &lt; 3 dead <input type="checkbox"/></p> <p>3. 3 - 5 dead <input type="checkbox"/></p> <p>4. &gt; 5 dead <input type="checkbox"/></p> | How satisfied are you with this situation?                                     | 1 | 2 | 3 | 4 | 5 |

|  |   |   |   |   |   |   |
|--|---|---|---|---|---|---|
| Are you free from depression, mental stress, anxiety etc.?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/> | How satisfied are you with your life situation? | 1 | 2 | 3 | 4 | 5 |
| Is everyone in the household in good health?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>               | How satisfied are you with the situation?       | 1 | 2 | 3 | 4 | 5 |

| SPIRITUAL   |   |                   |              |                                    |           |                |
|---|---|-------------------|--------------|------------------------------------|-----------|----------------|
| Descriptive<br>(Respondent is asked to describe his/her resources and conditions)   | Evaluative<br>(Respondent is asked to evaluate (in terms of satisfaction) his/her conditions) | Very dissatisfied | Dissatisfied | Neither dissatisfied nor satisfied | Satisfied | Very satisfied |
| How would you rate the level or degree of spirituality/religion in your life?<br>1. High <input type="checkbox"/> 2. Medium <input type="checkbox"/><br>3. Low <input type="checkbox"/> 4. N/A <input type="checkbox"/> | How satisfied are you with this situation?  | 1                 | 2            | 3                                  | 4         | 5              |
| Do you believe in religious or cultural customs and traditions and/or rituals?<br>Yes <input type="checkbox"/> No <input type="checkbox"/> Somewhat <input type="checkbox"/>  | How satisfied are you with it?  | 1                 | 2            | 3                                  | 4         | 5              |
| Are you involved in festivals and religious ceremonies?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>   | How satisfied are you with your involvement?  | 1                 | 2            | 3                                  | 4         | 5              |
| Is there a place of worship, such as a church or mosque, close by?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with the accessibility of a place of worship?                           | 1                 | 2            | 3                                  | 4         | 5              |
| Do you believe in (a) God?<br>1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  | How satisfied are you with your level of belief?  | 1                 | 2            | 3                                  | 4         | 5              |

**QOL Indicators (version III)**

**Respondent No.**

**Are you from this village?**

**Number of years of stay**

**Age**

**Marital status**

**Gender**

**Number of people at home**

**Number of rooms in your house**

**Family type (joint/nuclear)**

**Has there been any death (not due to old age) recently at home?**

**Are there any major problems at your village (robbery/group wars)**

## Economic

|  |   |
|--|---|
| <i>Employment and work conditions</i>  |   |
| Do you have a regular paid employment (> 6 m/yr)?  | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>   |
| What is your main occupation?  |   |
| Do you feel that your job is secure?   | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>   |
| Satisfaction with job  | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>  |
| <i>Income</i>  |   |
| What is your monthly wage or salary?   |   |
| What is the average income of your household? (Per month)  |   |
| Would you be able to meet unforeseen expenses of upto Rs.5000 within a week? (From bank, kin, etc) | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>   |
| Satisfaction with income   | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>  |
| <i>Opportunity space</i>   |   |
| Do you have access to any traditional livelihood opportunities?                                    | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>   |
| Do you have opportunities/access to learn new skills/develop old skills?                           | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>   |
| Do you have access to employment training programmes?  | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>   |
| How satisfied are you with the opportunities that you have?  | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>  |
| <i>Nutrition</i>   |   |
| How much do you spend on food per month?   |   |
| Do you and your family have sufficient food to eat in a day?                                       | 1. Yes <input type="checkbox"/> always                      2.No <input type="checkbox"/><br>3. Sometimes <input type="checkbox"/>  |
| Satisfaction with nutritional levels   | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>  |
| <i>Fuel used</i>   |   |
| What is the main cooking fuel used?  | 1. Gas <input type="checkbox"/> 2. Kerosene <input type="checkbox"/> 3. Fuel wood <input type="checkbox"/> 4. Twigs <input type="checkbox"/> 5. Dung <input type="checkbox"/><br>6. Any other <input type="checkbox"/>    |
| If collected, distance travelled:  | 1.Within 100 m <input type="checkbox"/><br>2.Within 500 m <input type="checkbox"/><br>3. Within 500m –1 km <input type="checkbox"/><br>4. >1 km <input type="checkbox"/><br>5. >Fuel wood bought <input type="checkbox"/> |

|  |  |
|--|--|
| How frequently do you collect firewood?                                  | (Per week)   |
| How long does it take?   | (In time)  |
| How much do you spend on fuel per month?                                 |  |
| How satisfied are you with fuel availability?                            | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>   |
| How satisfied are you with fuel affordability?                           | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>   |
| <b>Infrastructure</b>  |  |
| Do you have access to communication services (postal, email, telegraph)? | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>  |
| Do you have electricity in your home?                                    | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>  |
| How much do you spend on electricity/month?                              |  |
| Do you avail of water distributed by public services?                    | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>  |
| Do you use a telephone?  | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/><br>If yes, (√ below)<br>a. Public telephone <input type="checkbox"/><br>b. At home <input type="checkbox"/><br>c. Mobile/cellular phone <input type="checkbox"/> |
| Can you afford a phone at home?  | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>  |
| Do you use the public transport system?                                  | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>  |
| How much do you spend on the public transport system/month?              |  |
| How satisfied are you with the above services                            | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>   |
| <b>Assets</b>  |  |
| What material assets do you have? (Jewellery)                            | List   |
| How much land do you own? (In ha)  |  |
| Do you have any livestock?<br>(Number per type)                          | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>  |
| Do you have sufficient places to water and pasture livestock?            | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>  |

|   |   |
|---|---|
| Annual average/monthly income from livestock rearing (average)  |   |
| Do you fish in inland waters?   | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/> 3. NA <input type="checkbox"/>  |
| Satisfaction with these additional assets   | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>  |
| What amenities do you have?   | 1. Cars <input type="checkbox"/> 2. TV <input type="checkbox"/> 3.Videos <input type="checkbox"/><br>4. Telephone <input type="checkbox"/> 5. Fridge <input type="checkbox"/><br>6 Pump set <input type="checkbox"/> 7.Tubewell <input type="checkbox"/><br>8. Truck <input type="checkbox"/> 9. Cable <input type="checkbox"/> |
| How satisfied are you with them?  | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>  |
| Do you use any of the facilities offered by the government? (Starting new ventures/ subsidies, support, loan)<br>List | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/><br><i>If yes, list</i>  |

### Social

|  |  |
|--|--|
| <i>Family &amp; community life</i>                             |  |
| Do you have the support of the extended family and/or friends? | 1. Yes <input type="checkbox"/> always      2.No <input type="checkbox"/><br>3. Sometimes <input type="checkbox"/>   |
| Do you have a good family life?                                | 1. Yes <input type="checkbox"/> most of time      2.No <input type="checkbox"/><br>3. Sometimes <input type="checkbox"/>                                     |
| Do you have good relations with relatives?                     | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/><br>3. Sometimes <input type="checkbox"/>   |
| Do you have a community life?                                  | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/><br>3. Sometimes <input type="checkbox"/>   |
| Are you able to express solidarity with others?                | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>  |
| Satisfaction with family                                       | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/><br>3. N <input type="checkbox"/> 4. S <input type="checkbox"/> 5. VS <input type="checkbox"/> |
| Satisfaction with community life                               | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/><br>3. N <input type="checkbox"/> 4. S <input type="checkbox"/> 5. VS <input type="checkbox"/> |
| Choices re marriage and reproduction                           |  |
| Did/do you have a choice in matters regarding marriage?        | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/><br>3. Restricted <input type="checkbox"/> 4. N.A.  |
| How satisfied are you with the degree of freedom?              | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/> |

|   |   |
|---|---|
| Did/do you have a choice regarding the number and spacing of children?  | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/><br>3.Restricted <input type="checkbox"/> 4. N.A.  |
| How satisfied are you with the degree of freedom?   | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/><br>3. N <input type="checkbox"/> 4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>                                    |
| <b>Education</b>  |   |
| What educational qualification or level have you achieved?  | a. Primary level <input type="checkbox"/><br>b. Secondary level <input type="checkbox"/><br>c. Post secondary level <input type="checkbox"/><br>d. Vocational training <input type="checkbox"/> |
| How satisfied are you with your level of education attained?  | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/><br>3. N <input type="checkbox"/> 4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>                                    |
| Did/do your children have the opportunity to go to school?  | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>   |
| How satisfied are you with the education they have received?  | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/><br>3. N <input type="checkbox"/> 4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>                                    |
| <b>Social security</b>  |   |
| Do you have access to social security benefits? (E.g. free or subsidized medical support, child support, education support from the State, pension) | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/><br>3. Do not know <input type="checkbox"/>  |
| Satisfaction with social security   | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/><br>3. N <input type="checkbox"/> 4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>                                    |
| What kind of access to information do you have?   | Public-library <input type="checkbox"/><br>Private-Newspaper, Television <input type="checkbox"/><br>Radio <input type="checkbox"/><br>Any other <input type="checkbox"/>                       |
| Do you and/or your family have access to any sports facilities? (playground, fields, etc)   | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>   |
| Do you feel physically safe in the village? (I.e. free from crime or the threat of crime) (✓ Below)   | All the time <input type="checkbox"/><br>Most of the time <input type="checkbox"/><br>Some times <input type="checkbox"/><br>Never <input type="checkbox"/>                                     |
| Is there alcoholism within your family?   | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/><br>3. A little <input type="checkbox"/>   |



| Housing & shelter   |  |
|---|--|
| Ownership status of your house (shelter)?                 | 1. Own <input type="checkbox"/> 2. Rent <input type="checkbox"/><br>3. Shared <input type="checkbox"/>   |
| How satisfied are you with your housing?                  | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>   |
| What is the kind of sanitation facility available to you? | 1. No toilet <input type="checkbox"/><br>2. Inside home <input type="checkbox"/><br>3. Outside home <input type="checkbox"/><br>4. Public toilet <input type="checkbox"/><br>5. Any other <input type="checkbox"/> |
| How satisfied are you with your sanitation facilities?    | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>   |

**Political**

| Participation   |  |
|---|--|
| Do you participate in decision making/ planning/ implementing in any or all of the below? (√ Below) | a. Household level <input type="checkbox"/><br><br>b. Village/municipal level <input type="checkbox"/>   |
| How are you engaged in civic life? (√ Below)  | a. By voting <input type="checkbox"/><br>b. By being part of a cooperative society <input type="checkbox"/><br>c. Making demands of public services <input type="checkbox"/><br>d. By running for a public position/standing for election <input type="checkbox"/> |
| How satisfied are you with your engagement?   | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>   |
| Do you participate in local politics?   | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>  |
| Are you involved in monitoring critical issues in your village?                                     | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>  |
| How satisfied are you with your participation?  | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>   |
| Governance  |  |
| Do you find that there is enforcement of rules by government bodies?                                | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/><br>3. Do not know <input type="checkbox"/>   |
| Do you think there is misuse of authority in Goa in general?  | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/><br>3. Do not know <input type="checkbox"/>   |

|  |   |
|--|---|
| Do you find the following in your dealings with Government? (✓ As appropriate)   | a. Honesty <input type="checkbox"/><br>b. Stability <input type="checkbox"/><br>c. Accountability <input type="checkbox"/><br>d. None of the above <input type="checkbox"/> |
| How satisfied are you with governance in Goa?  | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>                |
| <b>Conflict resolution</b>   |   |
| What are the mechanisms you use or support to resolve conflict?<br>(Courts, police, <i>panchayat</i> )                       |   |
| Do you support the use of traditional ways to prevent & resolve conflict<br>(family, other informal groups, religious heads) | 1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  |
| How satisfied are you with the conflict resolution mechanisms that you have access to?                                       | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>                |
| <b>Political &amp; legal rights</b>  |   |
| Do you feel/ think you know your legal rights?   | 1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/><br>3. Sometimes <input type="checkbox"/>   |
| Do you have access to legal aid if you need it?  | 1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  |
| Can you afford legal aid if you were to need it?   | 1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  |
| Are you aware of your political rights? (Right to free speech, view)   | 1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/><br>3. Some of them <input type="checkbox"/>  |
| Satisfaction with political and legal situation  | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>                |

#### Environmental

|   |   |
|---|---|
| How would you describe the air quality that you are faced with in your daily life?                | 1. V Bad <input type="checkbox"/> 2. Bad <input type="checkbox"/><br>3. Fair <input type="checkbox"/><br>4. Good <input type="checkbox"/> 5. V. Good <input type="checkbox"/> |
| Are you free from noise (loud & constant)?  | 1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  |
| Is the place you live in free from man made vibrations?   | 1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>  |
| Satisfaction with level of noise and vibrations   | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>                  |
| How would you describe the water quality for drinking that you are faced with in your daily life? | 1. V Bad <input type="checkbox"/> 2. Bad <input type="checkbox"/> 3. Fair <input type="checkbox"/><br>4. Good <input type="checkbox"/> 5. V. Good <input type="checkbox"/>    |

|   |   |
|---|---|
| How would you describe the water quality for other purposes in your daily life?                               | 1. V Bad <input type="checkbox"/> 2. Bad <input type="checkbox"/><br>3. Fair <input type="checkbox"/> 4. Good <input type="checkbox"/><br>5. V. Good <input type="checkbox"/>                                       |
| How far do you need to go for drinking water?   | 1. Within house <input type="checkbox"/><br>2. Within 100 m <input type="checkbox"/><br>3. Within 200 m <input type="checkbox"/><br>4. Within 1 km <input type="checkbox"/><br>5. > 1 km <input type="checkbox"/>   |
| Do you have easy availability of water for other purposes?  | 1. Within house <input type="checkbox"/><br>2. Within 100 m <input type="checkbox"/><br>3. Within 200 m <input type="checkbox"/><br>4. Within 1 km <input type="checkbox"/><br>5. > 1 km <input type="checkbox"/>   |
| Satisfaction with water availability  | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>  |
| Satisfaction with water quality   | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>  |
| How would you describe the changes in the natural landscape around you?                                       | 1. No change <input type="checkbox"/> 2. V Bad <input type="checkbox"/><br>3. Bad <input type="checkbox"/> 4. Fair <input type="checkbox"/><br>5. Good <input type="checkbox"/> 6. V. Good <input type="checkbox"/> |
| How would you describe the quality of the land you have to cultivate and maintain animals?                    | 1. V Bad <input type="checkbox"/> 2. Bad <input type="checkbox"/><br>3. Fair <input type="checkbox"/> 4. Good <input type="checkbox"/><br>5. V. Good <input type="checkbox"/>                                       |
| How would you describe the changes in the number or quantity of plants in your area over the last ten years?  | 1. No change <input type="checkbox"/><br>2. Decreasing amount <input type="checkbox"/><br>3. Increasing amount <input type="checkbox"/>   |
| How would you describe the changes in the number or quantity of animals in your area over the last ten years? | 1. No change <input type="checkbox"/><br>2. Decreasing amount <input type="checkbox"/><br>3. Increasing amount <input type="checkbox"/>   |
| Do you feel exposed to the occurrence of calamities like floods, droughts, landslides, etc?                   | 1. Periodically in monsoons <input type="checkbox"/><br>2. Continuously <input type="checkbox"/><br>3. Rarely <input type="checkbox"/>  |
| Satisfaction with the overall quality of your physical environment  | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>  |

|   |  |                               |
|---|--|-------------------------------|
| Is the place (you work/live) clean?                                   | 1. Yes <input type="checkbox"/>  | 2.No <input type="checkbox"/> |
| Are there any open/green spaces around the place of work?             | 1. Yes <input type="checkbox"/>  | 2.No <input type="checkbox"/> |
| Are there any open/green spaces around the place you live?            | 1. Yes <input type="checkbox"/>  | 2.No <input type="checkbox"/> |
| Satisfaction with the overall appearance of the surrounding landscape | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/> |                               |

#### Biomedical

|   |   |                               |
|---|---|-------------------------------|
| Is there a family welfare centre? (Located within 10 kms radius)  | 1. Yes <input type="checkbox"/>   | 2.No <input type="checkbox"/> |
| Are there any maternity clinics/child care centres? (Within 10 kms radius)  | 1. Yes <input type="checkbox"/>   | 2.No <input type="checkbox"/> |
| Are there any dental clinics?   | 1. Yes <input type="checkbox"/>   | 2.No <input type="checkbox"/> |
| Are there any primary health care facilities? (Within 5 kms radius)   | 1. Yes <input type="checkbox"/>   | 2.No <input type="checkbox"/> |
| How would you describe the quality of health care facilities? (E.g. to have facilities with qualified nurses, regular physician visits, sufficient and clean equipment) | 1. V Bad <input type="checkbox"/> 2. Bad <input type="checkbox"/><br>3. Fair <input type="checkbox"/> 4. Good <input type="checkbox"/><br>5. V. Good <input type="checkbox"/> |                               |
| Satisfaction with health facilities available   | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>                  |                               |
| Is there any alternative or traditional medical system available to you?  | 1. Yes <input type="checkbox"/>   | 2.No <input type="checkbox"/> |
| How satisfied are you with the alternative or traditional medical system?   | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>                  |                               |
| Do you or your family use any of the immunisation programmes available?   | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/><br>3. NA <input type="checkbox"/>   |                               |
| Do you have any of the following?   | 1) Medical insurance<br>Public <input type="checkbox"/> /Private <input type="checkbox"/><br>2) Medical coverage <input type="checkbox"/>                                     |                               |
| Do you find western/modern medicines that you need easily available here?   | 1. Yes <input type="checkbox"/>   | 2.No <input type="checkbox"/> |
| How much do you spend on medicines per month?   |   |                               |
| Can you afford any of the immunisation programmes not supported by the government?  | 1. Yes <input type="checkbox"/>   | 2.No <input type="checkbox"/> |
| Do you get enough sleep/rest? (To have adequate ...sufficient stamina to carry out your daily activities)   | 1. Yes <input type="checkbox"/>   | 2.No <input type="checkbox"/> |
| Do you have good appetite and digestion?  | 1. Yes <input type="checkbox"/>   | 2.No <input type="checkbox"/> |
| Do you have good reproductive health/fertility?   | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/><br>3. NA <input type="checkbox"/>   |                               |

|   |  |
|---|--|
| Do you have sufficient vigour and stamina to carry out your daily activities?                       | 1. Never <input type="checkbox"/><br>2. Some of the time <input type="checkbox"/><br>3. Most of the time <input type="checkbox"/><br>4. All of the time <input type="checkbox"/> |
| Do you depend on western/modern medicines (in order to be able to undertake your daily activities?) | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>  |
| How satisfied are you with your health status in general?   | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>                     |
| Are you able to experience emotional compatibility with those important to you?                     | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>  |
| Do you have self-confidence/self-respect?   | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/><br>3. Sometimes <input type="checkbox"/>   |
| How satisfied are you with your emotional life?   | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>                     |
| Does your work involve health and safety risks?   | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/><br>3. NA <input type="checkbox"/>  |
| How satisfied are you with the health and safety work situation you are faced with?                 | 1. VDS <input type="checkbox"/> 2. DS <input type="checkbox"/> 3. N <input type="checkbox"/><br>4. S <input type="checkbox"/> 5. VS <input type="checkbox"/>                     |
| Is your family free from any physical or mental disabilities?                                       | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>  |
| Are you free from depression, mental stress, anxiety etc.?  | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>  |
| Has there been any death of young children in your family?  | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/> 3. NA <input type="checkbox"/>   |
| Is your family free from any acute or chronic illness?  | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>  |
| Type of frequent or recurring illness in the family   | Colds/asthma/diarrhoea /<br>malaria/dysentery/other  |

#### Spiritual

|  |   |
|--|---|
| What is the level of spirituality/religion in your life? | 1. High <input type="checkbox"/> 2. Medium <input type="checkbox"/> 3. Low <input type="checkbox"/><br>4. None <input type="checkbox"/> |
| Do you believe in customs and traditions/rituals?        | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/><br>3.Somewhat <input type="checkbox"/>                                    |
| Are you involved in festivals and religious ceremonies?  | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>   |
| Do you have strong personal beliefs?                     | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>   |
| Is there a place of worship close by?                    | 1. Yes <input type="checkbox"/> 2.No <input type="checkbox"/>   |

|  |  |  |                               |
|--|--|--|-------------------------------|
| Do you believe in a God?   | 1. Yes <input type="checkbox"/>                                  | 2.No <input type="checkbox"/>                                    |                               |
| How satisfied are you with your spiritual life?                    | 1. VDS <input type="checkbox"/><br>4. S <input type="checkbox"/> | 2. DS <input type="checkbox"/><br>5. VS <input type="checkbox"/> | 3. N <input type="checkbox"/> |
| How satisfied are you with the accessibility of places of worship? | 1. VDS <input type="checkbox"/><br>4. S <input type="checkbox"/> | 2. DS <input type="checkbox"/><br>5. VS <input type="checkbox"/> | 3. N <input type="checkbox"/> |
| How satisfied are you with your life in general?                   | 1. VDS <input type="checkbox"/><br>4. S <input type="checkbox"/> | 2. DS <input type="checkbox"/><br>5. VS <input type="checkbox"/> | 3. N <input type="checkbox"/> |