

PROJECT REFERENCE	PROJECT REFERENCE	PROJECT TITLE	KEYWORDS	ABSTRACT	PI SURNAME	PI NAME	PI 3 NAME & SURNAME	RESEARCH INSTITUTION	DEPARTMENT	CENTRE	START DATE	END DATE	FUNDING AGENCY	COUNTRY	
		WATER CONSERVATION, WHY IS NECESSARY AND THE TECHNOLOGY TO DO IT	GREEN ENTERPRISE; RECYCLING	IT IS THE AMBITION OF A QUICK SHARP LTD TO INTRODUCE THE RECYCLER 414 TO THE IRISH MARKET. THIS MOBILE TECHNOLOGY WILL REQUIRE 75% LESS WATER AND CAN RUN ON A RESERVE TANK FOR UP TO A WEEK DEPENDING ON THE NATURE OF THE JOB. THE INITIAL 10M3 RESERVE, REQUIRED FOR FILLING, WILL BE SOURCED FROM RAINWATER STORED AT OUR NEW FACILITY. TESTS HAVE PROVEN THAT THE MACHINE IS TWICE AS FAST AT COMPLETING A CLEANING TASK, LARGELY DUE TO THE FACT THAT IT REMAINS ON SITE AND DOES NOT LEAVE FOR DISPOSAL AND REFILL EVERY TWO HOURS. THE WASTE WATER PRODUCED BY THE RECYCLER IS FILTERED AND REUSED. THE WASTE MATERIAL IS STORED AT 25% SOLIDS UP TO A CAPACITY OF 8 TONS. THIS WILL IN TURN REDUCES BY HALF THE EMISSIONS CREATED DURING EACH CLEANING EXERCISE. FREQUENCY OF DISPOSAL WILL ALSO BE REDUCED TO ONE TENTH OF THE CONVENTIONAL JET VAC TRUCKS AND THIS WILL CONSIDERABLY THE TIME SPENT COMMUTING FROM THE WORK SITE TO THE DISPOSAL SITE. THIS WILL BRING ABOUT A CONSIDERABLE REDUCTION IN FUEL CONSUMPTION, EMISSIONS, THE WEAR AND HOPEFULLY FUEL FROM THE INCREASING TRAFFIC VOLUMES ON OUR ROADS. THE RECYCLER WILL ALSO PROVIDE AN ECONOMIC BENEFIT TO THE CUSTOMER AS THERE WILL BE SIGNIFICANTLY LESS	FURLEY	CON		A QUICK SHARP LTD.						ENVIRONMENTAL PROTECTION AGENCY	IRELAND
		BIODIVERSITY AND ECOLOGICAL REQUIREMENTS OF MEDITERRANEAN AND A TYPOLOGY FOR IRISH TRANSITIONAL WATERS.	BIODIVERSITY MEDITERRANEAN TYPOLOGY IRISH TRANSITIONAL WATERS	THE FOCUS OF THIS PROJECT WILL BE THE TAXONOMIC INVESTIGATION OF THE BIODIVERSITY OF THE UNDERSTUDIED MEDITERRANEAN HABITATS OF IRELAND'S ESTUARINE AND COASTAL ECOSYSTEMS. THE ECOLOGICAL REQUIREMENTS OF THE MEDITERRANEAN WILL BE ESTABLISHED FOR PRIORITY SPECIAL PROTECTED AREAS (SPAs) IN TRANSITIONAL WATERS ALONG WITH A SALINITY-PREY RELATIONSHIPS WITHIN THE MEDITERRANEAN.	WILSON	JAMES		UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TCD)						ENVIRONMENTAL PROTECTION AGENCY	IRELAND
		A POLLUTION ASSESSMENT OF THE TOLKA RIVER ESTUARY	POLLUTION RIVER	THIS PROJECT WILL EXAMINE THE IMPACT OF FUTURE CLIMATE CHANGE ON WATER RESOURCES IN IRELAND. HYDROLOGICAL SIMULATIONS WILL BE CARRIED OUT TO COMPARE RUNOFF GENERATED UNDER FUTURE CLIMATE SCENARIOS WITH RUNOFF GENERATED UNDER BASELINE CONDITIONS. DOWNSCALED GCM PREDICTIONS OF RAINFALL AND EVAPORATION WILL BE USED TO DRIVE THE PHYSICAL, PROCESS-BASED HYDROLOGICAL MODEL HYM. EMPHASIS WILL BE PLACED UPON THE EFFECTS OF CLIMATE CHANGE ON THE FREQUENCY AND DURATION OF LOW FLOWS AND THE MAGNITUDE AND RECURRING INTERVALS OF FLOOD EVENTS. THE IMPACT OF FUTURE LAND USE CHANGES WILL ALSO BE SIMULATED UNDER EACH SCENARIO. THE ANALYSIS WILL FOCUS ON SEVERAL RIVER CATCHMENTS WHICH WILL BE SELECTED ON THE BASIS OF A NUMBER OF CRITERIA.	BUGGY	CONOR		DUBLIN CITY UNIVERSITY (DCU)	SCHOOL OF BIOTECHNOLOGY DUBLIN CITY UNIVERSITY					ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	SMART Coast	SMART COAST	TECHNOLOGY SENSORS	ENVIRONMENTAL AND WATER QUALITY MONITORING & KEY TO MEASURING AND UNDERSTANDING THE CHEMICAL AND BIOLOGICAL QUALITY OF WATER AND FOR TAKING EFFECTIVE REMEDIAL ACTION. OVER THE COMING YEARS MONITORING OF WATER BODIES WILL INCREASE WITHIN EUROPE IN ORDER TO COMPLY WITH THE REQUIREMENTS OF THE WATER FRAMEWORK DIRECTIVE (WFD) (DIRECTIVE 2000/60/EC) AND GLOBAL TRENDS TO PRESSURE FROM CLIMATE CHANGE, THE ESTABLISHMENT OF HIGH QUALITY LONGLEAS (MARINE INSTITUTE AND SOUTH WEST REGIONAL AUTHORITY (SWRA)) IN A FOCUSSED PROGRAM OF RESEARCH THAT WILL CONTRIBUTE TO ESTABLISHING IRELAND'S REPUTATION AS A LOCATION FOR DEVELOPING FUTURISTIC SOLUTIONS TO WATER QUALITY MONITORING	DIAMOND	DERMOT		DUBLIN CITY UNIVERSITY (DCU)			08-01-05	01-07-09		ENVIRONMENTAL PROTECTION AGENCY; MARINE INSTITUTE	IRELAND
		BIODIVERSITY OF AQUATIC COLEOPTERA IN THE IRISH FARMED LANDSCAPE: THE SIGNIFICANCE OF PONDS.	BIODIVERSITY; BEETLES	PONDS ARE AN ESSENTIAL HABITAT FOR MANY PLANT AND ANIMAL SPECIES AND PLAY A CENTRAL ROLE IN MAINTAINING HIGH REGIONAL BIODIVERSITY. DESPITE THEIR ECOLOGICAL IMPORTANCE, LITTLE INFORMATION IS AVAILABLE ON PONDS IN IRELAND. TO IMPROVE OUR UNDERSTANDING OF THE ROLE OF PONDS AS A RESERVOIR OF BIODIVERSITY AND OF THE EFFECTS OF AGRICULTURE ON THIS DIVERSE HABITAT, AN ASSESSMENT OF THE CURRENT DISTRIBUTION OF FARM PONDS WILL BE CONDUCTED AND COMPARED WITH THE PAST DISTRIBUTION. AN ECOLOGICAL CLASSIFICATION OF IRISH FARM PONDS WILL BE DEVELOPED AND DETAILED SURVEYS WILL BE CONDUCTED, FOCUSING ON THE DIVERSITY OF WATER BEETLES AND PLANTS. PONDS WILL BE EVALUATED IN TERMS OF THEIR CURRENT AND POTENTIAL BIODIVERSITY.	GORIA	MARGHERITA		UNIVERSITY COLLEGE DUBLIN (UCD)			01-01-08	01-01-11		ENVIRONMENTAL PROTECTION AGENCY	IRELAND
		A BIOTECHNOLOGICAL SYSTEM FOR PRODUCTION OF VALUE-ADDED FOOD WASTES WITH EMPHASIS ON HIGH-VALUE ASPECTS.	GREEN ENTERPRISE; ANAEROBIC DIGESTION	THE PRIMARY OBJECTIVES OF THIS PROJECT ARE FOCUSED ON DEVELOPING AN INTEGRATED BIOTECHNOLOGICAL STRATEGY WHICH WILL MEET THE HIGHEST ENVIRONMENTAL AND PUBLIC HEALTH REGULATIONS FOR TRANSFORMATION OF VEGETABLE, FRUIT AND COOCCATIONARY WASTES (VFW) AND SELECTED SOURCE ORGANISMS WILL BE USED AS SAFE FOOD QUALITY (BROTHNAMES, METHANOL, BIODIARYS USING A VARIETY OF INDICATOR ORGANISMS) AND TEST PROCEDURES (SMR, COLLIER, INTENSIFY, ETC.) IN ORDER TO MEET THE HIGHEST ENVIRONMENTAL AND PUBLIC HEALTH STANDARDS, AND TO DETERMINE IDEAL REACTION CONDITIONS FOR BOTH THERMOPHILIC HYDROLYSIS AND THERMOTOLERANT DIGESTION WHICH WILL YIELD MAXIMUM RECOVERY OF THE TARGET WASTES TO ACHIEVE A COMPLETE PASTEURISATION, IN ORDER TO ENSURE A COMPLETE AND INTEGRATED.	COLLEMAN	EMER		NATIONAL UNIVERSITY OF IRELAND GALWAY (NUIIG)			01-12-01	01-01-06		ENVIRONMENTAL PROTECTION AGENCY	IRELAND
		ACTIVE MICROWAVE REMOTE SENSING OF SOIL MOISTURE	SOIL DETECTION	THE AMOUNT OF WATER STORED IN THE SOIL IS A KEY PARAMETER FOR THE ENERGY AND MASS FLUXES AT THE LAND SURFACE AND IS OF FUNDAMENTAL IMPORTANCE TO MANY AGRICULTURAL, METEOROLOGICAL, BIOLOGICAL AND BIOPHYSICAL PROCESSES. THE WORK PRESENTED IN THIS SIS INVESTIGATES THE USE OF SPACED-DIAPYCNIC APERTURE RADAR (SAR) DATA TO CHARACTERISE NEAR-RANGE DIFFERENTIAL TERRESTRIAL SAR (DANSAR) CAN BE USED FOR SOIL MOISTURE CONTENT DETECTION. RESULTS HIGHLIGHT THE VALUE OF MERGING COMPLEMENTARY INFORMATION DERIVED FROM BOTH THE INTENSITY AND PHASE OF THE BACKSCATTERED SIGNAL TO IMPROVE THE RELIABILITY OF THE RELATIONSHIP BETWEEN RADAR BACKSCATTER AND SOIL MOISTURE CONTENT AND ALSO SUPPORT THE HYPOTHESIS THAT A SOIL MOISTURE PHASE CONTRIBUTION EXISTS WITHIN DIFFERENTIAL INTERFEROMETRIC COVERING AGRICULTURAL AREAS WHICH HAVE IMPLICATIONS FOR STANDARD DIAPYCNIC ANALYSIS.	WHELAN	PADRAIG		UNIVERSITY COLLEGE CORK (UCC)			11-06-06	14-09-11		ENVIRONMENTAL PROTECTION AGENCY	IRELAND
		ASSESSING THE IMPACT THAT PLANT SPECIES MAY HAVE ON THE DIVERSITY AND ACTIVITY OF PHOSPHATE SOLUBILISING SOIL MICROBES	PHOSPHATE REDUCTION; OFF	PHOSPHATE CONTAMINATION OF SURFACE AND GROUNDWATER BY AGRICULTURAL RUN-CULTURABLE BACTERIA AND FUNGI TO ASSESS HOW SPECIFIC PLANTS AFFECT DIVERSITY AND ACTIVITY OF THE MICROBES THAT SOLUBILISE INORGANIC PHOSPHATE.	O'GARA	FERGAL		UNIVERSITY COLLEGE CORK (UCC)			01-10-06	01-10-09		ENVIRONMENTAL PROTECTION AGENCY	IRELAND
		THE IMPACT OF ON-SITE WASTEWATER EFFLUENT ON RIVERS AND WELLS	DOMESTIC WASTEWATER TREATMENT; SURFACE WATER	THE DOMESTIC WASTEWATER OF APPROXIMATELY ONE THIRD OF THE POPULATION IN IRELAND, 750,000 DWELLINGS, IS TREATED ON DATA AND ANALYSIS FOR POLICY MAKERS WITH RESPECT TO DECISION BEING MADE ON THE PRESSURES IN CATCHMENTS IN BOTH	GILL	LAURENCE		UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TCD)			01-04-13	01-04-16		ENVIRONMENTAL PROTECTION AGENCY	IRELAND
		THE ROLE OF PASSIVE SAMPLING IN SCREENING AND MONITORING OF NEW AND EMERGING CHEMICALS	PASSIVE SAMPLING; PRIORITY SUBSTANCES; PHARMACEUTICAL SUBSTANCES	THIS PROJECT WILL PILOT THE USE OF PASSIVE SAMPLING TECHNOLOGY COMBINED WITH BIOTA MONITORING TO ASSESS THE PRESENCE OF PRIORITY SUBSTANCES IN HIGH SURFACE WATERS. THIS WILL FOCUS IN PARTICULAR ON NEW POLLUTANTS MARKED AS CANDIDATES FOR THE ANNEX B PRIORITY SUBSTANCES LIST UNDER THE EU WATER FRAMEWORK DIRECTIVE. THIS WILL CONSIDER THE IMPLICATIONS FOR COMPLIANCE WITH CURRENT AND PROPOSED EGS AND INVESTIGATE THE POTENTIAL FOR INCORPORATING PASSIVE SAMPLING AND BIOTA TESTING IN FUTURE COMPLIANCE, INVESTIGATIVE AND TRENDS MONITORING. KEY OBJECTIVES OF THIS PROJECT ARE: TEST USE OF VARIOUS PASSIVE SAMPLING TECHNOLOGIES AND BIOTA MONITORING IN SURFACE WATER MONITORING OF PRIORITY SUBSTANCES IN IRELAND. QUANTITATIVE AND QUALITATIVE SCREENING OF SELECTED PRIORITY SUBSTANCES AND PROPOSED PRIORITY SUBSTANCES IN A NUMBER OF IRISH WATERS REPRESENTATIVE OF DIFFERENT PRESSURES. BROAD QUALITATIVE SCREENING FOR OTHER SUBSTANCES IN SURFACE WATERS TO IDENTIFY POTENTIAL NEW POLLUTANTS. ASSESS STATUS OF CYPERMETHIN POLLUTION IN IRISH SURFACE WATERS. SCREENING STUDY OF CERTAIN PHARMACEUTICAL SUBSTANCES IN IRISH SURFACE WATERS. DEVELOP RECOMMENDATIONS AND GUIDELINES FOR USE OF PASSIVE SAMPLERS IN FUTURE MONITORING OF SURFACE	REGAN	FIONA		DUBLIN CITY UNIVERSITY (DCU)			18-02-13	17-02-16		ENVIRONMENTAL PROTECTION AGENCY	IRELAND
		TARGETING PAYMENTS FOR ECOSYSTEM SERVICES TO ADDRESS THE FAVOURABLE CONSERVATION STATUS OF KEY FRESHWATER HABITATS	ECOSYSTEM SERVICES; FRESHWATER SPECIES	THE PRIMARY AIM OF THIS PROJECT IS TO DEVELOP A FRAMEWORK FOR TARGETING PAYMENTS FOR ECOSYSTEM SERVICES (PES) TO ADDRESS THE FAVOURABLE CONSERVATION STATUS OF KEY FRESHWATER AQUATIC HABITATS AND SPECIES. THE RESEARCH APPROACH TO BE BASED ON THE DETAILED CHARACTERISATION OF CATCHMENTS, WITH NATIONAL AND/OR INTERNATIONAL PRIORITY FRESHWATER AQUATIC HABITATS OR SPECIES. THROUGH DATA GATHERING AND MINING OF LAND-CRITERIA DECISION ANALYSIS WILL BE USED TO SELECT A NUMBER OF REPRESENTATIVE CATCHMENTS FOR MORE DETAILED CASE STUDIES OF HOW BEST TO TARGET PES IN RETURN FOR THE CONSERVATION OF KEY FRESHWATER AQUATIC HABITATS AND SPECIES. THESE RELATIONSHIPS BETWEEN THE BASIC REQUIREMENTS OF CROSS-COMPLIANCE REGULATIONS AND PES WILL BE EXPLORED. THIS STUDY WILL ALSO INVESTIGATE HOW TO SPATIALLY TARGET PES WITHIN CATCHMENTS, USING HIGH RESOLUTION DIGITAL TERRAIN MODEL DATA. THE OUTPUTS OF VALUATION ANALYSIS OF KEY ECOSYSTEM SERVICES WILL BE INTEGRATED WITH THE HYDROLOGICAL CONNECTIVITY ANALYSIS WITHIN A GIS FRAMEWORK TO DEVELOP A RISK-BASED APPROACH FOR THE TARGETING OF PES WITHIN SELECTED CATCHMENTS. RECOMMENDATIONS ON INSTITUTIONAL STRUCTURES, MECHANISMS	SHERIDAN	HELEN		UNIVERSITY COLLEGE DUBLIN (UCD)			01-09-13	01-09-16		ENVIRONMENTAL PROTECTION AGENCY	IRELAND
		THE ECOLOGICAL SIGNIFICANCE OF WATER AVAILABILITY FOR BURDEN PLANT COMMUNITIES	WATER AVAILABILITY; BURDEN ECOLOGY	THE BURDEN AREA IN CO. CLARE, IS ONE OF EUROPE'S MOST BOTANICALLY IMPORTANT REGIONS, ALTHOUGH OUR UNDERSTANDING OF THE FACTORS WHICH HAVE SHAPED THE TYPES OF PLANT COMMUNITIES PRESENT ARE STILL UNKNOWN. GIVEN THE INCREASED POLITICAL, ECONOMIC AND CONSERVATION ISSUES ASSOCIATED WITH TOURISM AND ALTERED LAND USE PATTERNS, MORE ECOLOGICAL INFORMATION IS REQUIRED FOR THE FORMULATION OF APPROPRIATE MANAGEMENT PLANS FOR SUSTAINED USE OF THIS REGION. WE HAVE RECENTLY IDENTIFIED WATER AVAILABILITY AS A POTENTIALLY ECOLOGICAL DETERMINANT AND THIS STUDY WILL PROVIDE A DETAILED ASSESSMENT OF THE ROLE OF WATER IN THE ECOLOGY OF COMMON BURDEN PLANTS.	OSBORNE	BRUCE		UNIVERSITY COLLEGE DUBLIN (UCD)			01-11-02	01-03-07		ENVIRONMENTAL PROTECTION AGENCY	IRELAND
		CLIMATE CHANGE IN IRELAND: REFINING THE IMPACTS	CLIMATE CHANGE; MODELLING	AN INITIAL EXERCISE IN STATISTICAL DOWNSCALING SUGGESTS A MEAN JANUARY TEMPERATURE IN THE RANGE 6 PROGRAMME'S AIMS TO DEVELOP PRACTICAL METHODS FOR THE INTEGRATION OF ENVIRONMENTAL CONSIDERATIONS INTO POLICIES AND PROGRAMMES OF THE MAIN ECONOMIC SECTORS SHOULD BE ASSISTED.	SWEENEY	JOHN		NATIONAL UNIVERSITY OF IRELAND, MAYNOOTH (NUIIM)			01-12-01	01-12-06		ENVIRONMENTAL PROTECTION AGENCY	IRELAND

	QUANTIFYING DISSOLVED CARBON LOSSES FROM SOILS: EFFECTS OF LAND USE AND MANAGEMENT PRACTICES	SOILS CARBON STORAGE; GROUNDWATER	THERE IS MAJOR UNCERTAINTY IN THE ESTIMATES OF CARBON STORAGE IN SOILS DUE TO SIGNIFICANT LOSSES OF CARBON VIA GROUNDWATER. LAND USE AND MANAGEMENT WILL INFLUENCE GROUND WATER CARBON LOSSES BUT THEY ARE RARELY QUANTIFIED AND DIRECT COMPARISONS BETWEEN LAND USES HAVE NOT BEEN MADE. TO ADDRESS THESE UNCERTAINTIES, WE WILL MEASURE GROUND WATER CARBON LOSSES FOR THREE OF IRELAND'S MAJOR LAND USE CATEGORIES, ARABLE, GRASSLAND AND FOREST, AS WELL AS EXAMINING THE INFLUENCE OF DIFFERENT LAND MANAGEMENT SYSTEMS. BY UTILISING ONGOING MEASUREMENTS OF CARBON DIOXIDE EXCHANGE, WE WILL PROVIDE AN IMPROVED ASSESSMENT OF CARBON SEQUESTRATION POTENTIAL OF MANAGED ECOSYSTEMS.	OSBORNE	BRUCE	UNIVERSITY COLLEGE DUBLIN (UCD)				03-01-06	03-01-10	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	INVASIVE ALIEN AQUATIC PLANTS IN IRELAND; FROM ECOPHYSIOLOGICAL TRAITS TO MANAGEMENT STRATEGIES	INVASIVE ALIEN AQUATIC PLANTS; ECOLOGICAL IMPACT; EUTROPHICATION	INVASIVE ALIEN AQUATIC PLANTS (IAAP) ARE AN INCREASING ECONOMIC AND ECOLOGICAL THREAT TO IRELAND'S FRESHWATERS COMPARED TO THE EXTENSIVE LITERATURE ON TERRESTRIAL INVASIVE PLANT SPECIES, MUCH LESS IS KNOWN ABOUT THE PHENOLOGICAL TRAITS AND HABIT PREFERENCES UNDERPINNING INVASIVENESS OF FLOATING AND SUBMERGED AQUATIC INVASIVE PLANTS, AND HOW THESE APPLY TO IRISH WATERS. UNDERSTANDING THE COMMUNITY BIODIVERSITY OF ALIEN AQUATIC PLANTS, PARTICULARLY SPECIES TRAITS GOVERNING INVASION SUCCESS, IS VITAL FOR PREDICTING THEIR FUTURE DISTRIBUTION, ECOLOGICAL IMPACT AND TO DEVELOP EFFECTIVE MANAGEMENT CONTROL STRATEGIES. IN THIS PROJECT, WE WILL ANALYSE GROWTH AND INVASIVENESS IN THE CONTEXT OF THE SEASONALITY OF THE IRISH CLIMATE, AND IN RESPONSE TO ENHANCED LEVELS OF PLANT NUTRIENTS (EUTROPHICATION). WE WILL ALSO DETERMINE THE SEASONALITY OF HERBIVORE EFFECTIVENESS. THE PROPOSED PROGRAMME INTEGRATES DATABASE MINING, FIELD AND MESOCOSM APPROACHES, WILL ENHANCE OUR UNDERSTANDING OF THE THREAT POSSED BY ALIEN AQUATIC PLANTS IN IRELAND, AND WILL INFORM MANAGEMENT STRATEGIES.	JANSEN	MARCEL	UNIVERSITY COLLEGE CORK (UCC)				01-09-13	01-09-16	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	DEVELOPMENT OF FILTRATION TECHNOLOGIES FOR EFFECTIVE, LOW-COST EFFICIENT AND ROBUST WATER TREATMENT	DRINKING WATER; WATER REMEDIAL ACTION LIST	THE PROVISION OF SAFE DRINKING WATER IS VITAL TO MAINTAINING GOOD PUBLIC HEALTH. FURTHERMORE CLEAN POTABLE WATER PROVIDES SIGNIFICANT ECONOMIC BENEFITS AS IT'S ESSENTIAL FOR COMMERCIAL USERS. THE IDENTIFICATION OF UNSAFE WATER SUPPLIES AND THE PROVISION OF REMEDIATION MEASURES CAN INCUR SIGNIFICANT COSTS. IN SOME CASES, PROBLEMS IDENTIFIED ARE AS A RESULT OF, OR EXACERBATED BY CURRENT WATER TREATMENT SYSTEMS WHICH MAY BE HYDRAULICALLY OVERLOADED. THE EPA HAVE PUBLISHED A WATER REMEDIAL ACTION LIST, WHICH DETAILS THE LEVEL OF ACTION NECESSARY AT DRINKING WATER FACILITIES WHERE ELEVATED LEVELS OF CONTAMINANTS HAVE BEEN IDENTIFIED. CONTAMINANTS PARTICULARLY IDENTIFIED INCLUDE TRICHALOTHAMINE, CHLOROFORMIUM, ALUMINIUM, AND TURBIDITY. THIS IS A VITAL THAT TREATMENT TECHNOLOGIES, INSTALLED ON SITE, ARE FIT FOR PURPOSE, DURABLE, WELL MAINTAINED, ROBUST AND ENERGY EFFICIENT. SIMPLICITY OF USE AND OPERATION ARE ALSO IMPORTANT FACTORS. FILTRATION TECHNOLOGIES REMAIN A COST EFFECTIVE AND EFFICIENT SOLUTION. THIS PROJECT PROPOSES THE USE OF SAND FILTRATION TECHNOLOGIES, WITH NOVEL AUGMENTATIONS AS SOLUTIONS TO ENHANCE THE REMOVAL OF CONTAMINANTS INCLUDING ALUMINIUM, THMS AND CHLOROFORMIUM. THE NOVEL LESIONS WILL ALSO BE REQUIRED TO	CLIFFORD	EOGHAN	NATIONAL UNIVERSITY OF IRELAND GALWAY (NUIG)				01-01-19	01-01-16	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	USE OF FILTERS FOR TREATMENT OF DRINKING WATER	DRINKING WATER; COLOURS; EMERGING MICROBIAL CONTAMINANTS	SAND FILTER TECHNOLOGIES WILL BE INVESTIGATED FOR THE REMOVAL OF COLOUR, THMS, VIRUSES AND EMERGING MICROBIAL CONTAMINANTS. VARIOUS MEDIA WILL BE INVESTIGATED FOR ADSORPTIVE PROPERTIES AND EFFICACY. THE MECHANISMS UNDERPINNING THE BIOLOGICAL INACTIVATION OF THE CONTAMINANTS WILL BE INVESTIGATED, WHICH IS AN IMPORTANT ASPECT OF THE PROPOSAL. THE STUDENT WILL JOIN A CONSORTIUM OF BIOLOGISTS/ENGINEERS AND WILL ALSO DETERMINE THE COMPOSITION OF THE COMMUNITY UNDERPINNING FILTER SYSTEMS TREATING THMS, ALUMINIUM AND VARIOUS OTHER EMERGING CONTAMINANTS.	COLLINS	GAVIN	NATIONAL UNIVERSITY OF IRELAND GALWAY (NUIG)				01-05-13	30-04-16	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	DEVELOPMENT OF A NOVEL PROCESS FOR THE REMOVAL OF SELECTED ORGANIC COMPOUNDS FROM WASTE STREAMS	WASTEWATER; ORGANIC COMPOUNDS REMOVAL	THIS RESEARCH PROJECT INVOLVES THE DEVELOPMENT OF A SOLID-REGENERABLE CATALYTIC REACTOR FOR TREATING SELECTED ORGANIC BEARING WASTE STREAMS. THIS WILL BE ACHIEVED BY A TWO-STEP IN FURTHER CYCLES OF THE OVERALL TREATMENT PROCESS.	O'DWYER	TOM	UNIVERSITY OF LIMERICK (UL)				01-11-06	01-05-10	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	QUANTIFYING LINKS BETWEEN TURLOUGH VEGETATION COMMUNITY DIVERSITY AND HYDROLOGY	TURLOUGH DIVERSITY; FLOODING	THIS PROJECT WILL DERIVE QUANTITATIVE RELATIONSHIPS BETWEEN THE VEGETATION OF TURLOUGH'S PROPERTY (TURLOUGH HABITATS, LARGELY RESTRICTED TO IRELAND) AND THE INCIDENCE OF FLOODING. VEGETATION COMMUNITIES IN A RANGE OF TURLOUGH HABITS WILL BE DESCRIBED QUANTITATIVELY, THEREBY PROVIDING GREAT IMPROVEMENT ON CURRENTLY AVAILABLE QUALITATIVE DESCRIPTIONS. THESE DATA WILL BE USED TO DESCRIBE HOW VEGETATION CHANGES ALONG GRADIENTS OF FLOODING, USING DATA DERIVED FROM CONTINUOUSLY MONITORED WATER DEPTH IN SELECTED TURLOUGH BASKINS, AND THIS APPROACH WILL BE USED TO DERIVE PREDICTIVE MODELS OF TURLOUGH VEGETATION IN RELATION TO FLOODING. THE INFORMATION PROVIDED WILL HELP TO DELIVER BOTH ENVIRONMENTAL AND BIODIVERSITY CONSERVATION POLICY.	WALDRIN	STEPHEN	UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TCD)				04-07-05	04-09-12	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	BIOGEOST FORESTRY AND ENVIRONMENT IMPACTS ADDRESSING WATER QUALITY AND BIODIVERSITY BIODIVERSITY ASSESSMENT OF AFFORESTATION SITES	FORESTRY; WATER QUALITY; AFFORESTATION	DEVELOPMENT OF METHODOLOGIES FOR BIODIVERSITY ASSESSMENT AND IDENTIFY INDICATOR SPECIES IN IMPORTANT HABITATS WHICH MIGHT BE SUBJECTED TO AFFORESTATION. ASSESS THE EFFECTS OF THE FORESTRY BIODIVERSITY GUIDELINES AND RECOMMEND IMPROVEMENTS. THE ABOVE OBJECTIVES WILL BE ACHIEVED BY IDENTIFYING STUDY SITES AND COMPARING AFFORESTATION SITES WITH ADJACENT, CLOSELY COMPARABLE SITES WHICH ARE TO REMAIN UNPLANTED. THE LOCATION OF THE SITES WILL BE STRATIFIED ACCORDING TO HABITAT TYPE AND WILL INCLUDE UNIMPROVED GRASSLAND, PEAT LAND AND LOWLAND AGRICULTURAL SITES, INCLUDING AFFORESTATION IS MAINTAINED WITHIN ONE HABITAT TYPE. AN INFLUENCING AND WILL BE ABLE TO INFORM MANAGEMENT PRACTICES AS TO THE LIKELY EFFECTS ON THE SPECIES COMPLEMENT AND MAY LEAD TO THE IDENTIFICATION OF POTENTIAL PROCESSES TO AMPLIFY NEGATIVE EFFECTS ON BIODIVERSITY. THE DATA WILL ALSO BEGIN TO CONTRIBUTE TO IDENTIFYING THE ACTUAL RANGE AND DIVERSITY OF SPECIES PRESENT IN IRISH PLANTATION FORESTS.	REIDINGER	SILVIA	UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TCD)				15-11-00	15-03-06	ENVIRONMENTAL PROTECTION AGENCY, COPORD	IRELAND
	PHARMACEUTICAL RESIDUES WITHIN SEWAGE SLUDGES	WASTEWATER; SLUDGES; PERSONAL CARE PRODUCTS	THE POTENTIAL THREAT OF PHARMACEUTICALS AND PERSONAL CARE PRODUCTS (PPCS) TO THE ENVIRONMENT HAS EMERGED AS A TOPIC OF CONCERN IN RECENT YEARS. TO DATE THERE EXISTS A SCARCITY OF ANALYTICAL METHODS TO EMPIRICALLY DETERMINE THEIR OCCURRENCE IN SOLID MEDIA. THIS IS TO DEVELOP ROBUST ANALYTICAL METHODS FOR SOIL AND SLUDGE ANALYSIS (WATER PARTITION COEFFICIENT FOR ALL COMPOUNDS IN AQUEOUS SEWAGE SLUDGE AND SOIL SUSPENSIONS, VI) TO ASSESS THE MOBILITY OF SUCH COMPOUNDS IN SEWAGE SLUDGE AMENDED SOILS AFTER EXPOSURE TO RAINFALL. PHARMACEUTICALS CHOSEN FOR STUDY: TOTAL OF 61 SPECIES WERE CHOSEN TO ENCOMPASS A WIDE VARIETY OF THERAPEUTIC CLASSES (SPECIFICALLY DERIVING FROM ANTIBIOTICS ANALGESICS NON-NSAIDS) IT WAS POSSIBLE TO DETECT ANALYTES IN EACH SAMPLE TYPE AT THE LOW-CONCENTRATION LIQUID CHROMATOGRAPHY AND LONG MONOLITHIC COLUMN TECHNOLOGIES TO REDUCE ON SUPPRESSION EFFECTS IN MASS SPECTROMETRY.	BARRON	LEON	DUBLIN CITY UNIVERSITY (DCU)				27-03-06	27-03-09	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	CONSENSUS CONSENSUS: A CROSS-BORDER HOUSEHOLD ANALYSIS OF CONSUMPTION, ENVIRONMENT AND SUSTAINABILITY IN IRELAND	WATER CONSUMPTION; SUSTAINABILITY	THIS RESEARCH EXAMINES FOUR KEY AREAS OF HOUSEHOLD CONSUMPTION THAT CURRENTLY IMPACT NEGATIVELY ON THE ENVIRONMENT AND INHIBIT OUR ABILITY, BOTH IN NORTHERN IRELAND AND THE REPUBLIC, TO ACHIEVE SUSTAINABLE DEVELOPMENT: TRANSPORT, ENERGY, WATER AND FOOD. A SET OF INTEGRATED WORK PACKAGES WILL ADDRESS FOUR THEMES IDENTIFIED IN THE 2007 STIRNY CALL: HOW CONSUMPTION CAN BE MEASURED AND EVALUATED (THEME 1); HOW SUSTAINABLE BEHAVIOURS AND PRACTICES ARE BEING DEVELOPED AND IMPLEMENTED (THEME 2); IDENTIFYING LINKS BETWEEN CONSUMPTION, HEALTH AND WELL BEING (THEME 3) AND FINALLY HOW MATTERS OF HOUSEHOLD CONSUMPTION ARE BEING GOVERNED THROUGH INSTITUTIONAL PRACTICE AND PARTICIPATION (THEME 5). IN ADDITION TO THE REQUIRED SIX SITES.	DAVIES	ANNA	UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TCD)				05-01-09	05-01-13	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	PARTICIPATIVE DEMOCRACY AND THE EU WATER FRAMEWORK DIRECTIVE: A SOCIOLOGICAL STUDY	PUBLIC PARTICIPATION; WATER FRAMEWORK DIRECTIVE	THIS RESEARCH PROJECT WILL UNDERTAKE A SOCIOLOGICAL ANALYSIS OF HOW THE PUBLIC CONSULTATION AND PARTICIPATIVE PROCESSES REQUIRED BY THE EU WATER FRAMEWORK DIRECTIVE (WFD) (2000/60/EC) ARE BEING ORGANISED AND PRACTICED IN THE REPUBLIC OF IRELAND. THE PROJECT WILL ADDRESS THREE INTERRELATED RESEARCH QUESTIONS REGARDING: 1. THE SOCIAL, ECONOMIC, POLITICAL AND INSTITUTIONAL CONTEXTS WHICH INFLUENCE THE CONSULTATIVE AND PARTICIPATIVE ORGANISATIONAL FORMS AND PRACTICES, 2. THE CULTURAL AND DISCURSIVE RESOURCES OF THE PARTICIPANTS, AND HOW THESE ARE USED STRATEGICALLY BOTH IN INTERACTION WITHIN THE CONSULTATIVE GROUP AND WITH RELEVANT INTERESTS AND PUBLIC OUTSIDE THE GROUP; AND 3. THE CONSEQUENCES OF THESE PARTICIPATIVE ORGANISATIONAL FORMS AND PRACTICES IN TERM OF PROMOTING PARTICIPATIVE AND INCLUSIVE DEMOCRACY AND THE RELATED SOCIAL AND INSTITUTIONAL LEARNING NECESSARY TO SUPPORT THE ATTAINMENT OF ENVIRONMENTAL SUSTAINABILITY OBJECTIVES.	KELLY	MARY	UNIVERSITY COLLEGE DUBLIN (UCD)				01-11-05	18-08-11	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	ENVIRONMENTALLY SUSTAINABLE CONVERSION OPTIONS FOR LARGE VOLUME ORGANIC WASTES	NUTRIENTS; AGRICULTURAL WASTES; LANDFILLING	EXISTING USE OF AGRICULTURAL WASTES AND RESIDUES, FOR EXAMPLE EXCESSIVE FERTILISERS AND PESTICIDES, HAS CAUSED SIGNIFICANT ENVIRONMENTAL IMPROVEMENT OF WATER BODIES WITH NUTRIENTS (PHOSPHATES AND NITRATES), THE RISK OF PATHOGENS, CO2 AND AMMONIA EMISSIONS ARE SOME OF THE PROBLEMS ASSOCIATED WITH ANIMAL WASTE DISPOSAL METHODS IN USE TODAY. VARIOUS SOLUTIONS HAVE BEEN SUGGESTED AND FURTHER PROGRESS CAN NOW ONLY BE MADE THROUGH THE ANALYSIS OF REAL INFORMATION FROM TRIALS AND DEMONSTRATIONS WE HAVE CHOSEN TO WORK WITH POLYTRIX MANURE AS THE PRIORITY WASTE. THE KANTOHER POLYTRIX PRODUCERS ASSOCIATION (PPAL) LOCATED IN COUNTY LIMERICK, HAS BEEN VERY INTERESTED IN RENEWABLE ENERGY SOURCES AND USING THE ENERGY TO HEAT THE POLYTRIX HOUSES. THE POSSIBILITY THAT ELECTRICITY MAY ALSO BE PRODUCED FROM THE ORGANIC WASTE WILL ALSO BE INVESTIGATED. THE PRIMARY TARGET OF THE TRIAL AND DEMONSTRATION OF THE OPTIMUM CONVERSION FACILITY, WITHIN THE CONFINES OF THE AVAILABLE BUDGET, RESOURCES WILL ALSO BE PROVIDED FOR THE STUDY OF IMPACT AND FEASIBILITY OF PROMISED SYSTEMS.	LEAHY	MARTIN	UNIVERSITY OF LIMERICK (UL)				01-11-00	01-06-04	ENVIRONMENTAL PROTECTION AGENCY	IRELAND

	EUTROPHICATION FROM AGRICULTURAL SOURCES (PHOSPHORUS AND NITROGEN); LEACHING SOIL INVESTIGATION WORK PACKAGE	EUTROPHICATION, NITRATE, LEACHING; LEACHING; RECHARGE	MUCH OF THE INTENSIVE DAIRY FARMING IN IRELAND IS LOCATED ON FREE A. DIRTY WATER AND FARM SLURRY ARE APPLIED TO HIGH MOISTURE WERE APPLIED. CHEMICAL FERTILISER, (ii) TENSOMETERS TO MEASURE THE PRESSURES OF THE SOIL PORE WATER AND (iii) NEUTRON POROSIMETERS TO ESTIMATE SOIL WATER CONTENTS AT DIFFERENT DEPTHS. PORE WATER SAMPLES WERE TAKEN WEEKLY DURING THE SUMMER AND TWICE WEEKLY DURING THE WINTER AND ANALYSED FOR NITRATE FEBRUARY N APPLICATIONS. THE HIGH FERTILISER (207 KG N/HA) GAVE RISE TO HIGH NITR-N CONCENTRATIONS OF THE SOIL PORE WATER TO HIGH LEVELS. NONE OF THE SLURRY APPLICATIONS OF LOW (15 MJ/HA) MEDIUM (30 MJ/HA) AND HIGH (60 MJ/HA) HAD A SIGNIFICANT EFFECT ON SOIL PORE WATER NITR-N CONCENTRATIONS IN SOIL. BECAUSE QUICKLY UNDER HIGH RECHARGE CONDITIONS THERE WAS VERY GOOD AGREEMENT BETWEEN THE CALCULATED DEPTH OF TRAVEL OF NITR-PASS OR MACROPORE FLOW IN THE SOIL AT THE EXPERIMENTAL SITE.	MULQUEEN	JOHN	TEAGASC			01-11-00	01-07-05	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	FORESTRY AND ENVIRONMENT IMPACTS ADDRESSING WATER QUALITY AND BIODIVERSITY FORESTRY AND THE POTENTIAL FOR SURFACE WATER ACCIDENTION	FORESTRY; WATER QUALITY; ACCIDENTION	THIS STUDY FORMS PART OF THE ENVIRONMENTAL PROTECTION AGENCY'S ENVIRONMENTAL ITO PROGRAMME 2000. 3 POINT NUTRIENT INPUTS FROM AGRICULTURAL LAND TO SURFACE WATER (CASTLE ET AL., 1994). HOWEVER, CORRIE AND JOVACE (1999) NOTE THAT THEY ARE NOT AS EFFECTIVE IN REDUCING NUTRIENT LOAD IN FIELDS WITH ARTIFICIAL DRAINAGE. BUFFER STRIPS MAY ALSO PLAY A ROLE IN LIMITING CONTAMINATION OF WATERS BY PESTICIDES (GILL ET AL., 1997; SOONG ET AL., 1998). IN ADDITION, AS THEY ENCOMPASS PART OF ALL OF THE RIBBON ZONE, THEY CAN ACT AS WINDLIFT CORRIDORS AND ARE OFTEN AN AREA OF HIGH SPECIES RICHNESS (BUNMAN AND DECAWAS, 1997). IFA FORESTRY COMMISSION, 2000. BELT ET AL. (1992) REVIEWED LITERATURE ON BUFFER STRIP EFFECTIVENESS IN FORESTRY ECOSYSTEMS. THEY STATED THAT SCIENTISTS WERE AT DIFFERENT STAGES IN THEIR UNDERSTANDING OF THE FUNCTIONS PROVIDED BY BUFFER STRIPS AT THAT TIME, INCLUDING THEIR USE AS SEDIMENT AND NUTRIENT TRAPS. THEY REPORTED THAT IN MOUNTAINOUS TERRAIN, WATER REGULARLY MOVES THROUGH BUFFER STRIPS AS CHANNELLED FLOW AND LESS FREQUENTLY AS OVERLAND FLOW. THIS BYSCALE INTEGRATED PROJECTS AND IS ENTITLED FORESTRY AND ENVIRONMENT IMPACTS ADDRESSING WATER QUALITY AND BIODIVERSITY.	GILLER	PAUL	UNIVERSITY COLLEGE CORK (UCC)			01-12-01	01-10-05	ENVIRONMENTAL PROTECTION AGENCY, COFORD	IRELAND
	EUTROPHICATION FROM AGRICULTURAL SOURCES (PHOSPHORUS AND NITROGEN); GROUNDWATER WORK PACKAGE	EUTROPHICATION; NITRATE; LEACHING; GROUNDWATER	GROUNDWATER IS THE USUAL RECEIVING ENVIRONMENT FOR NITRATE LEACHING FROM NEARBY STRATIFIED (JOHNSTON ET AL. 1998). IDENTIFYING AND UTILIZING THE KEY CONTROLLING FACTORS IN A GIVEN AREA, IT IS THE PHILOSOPHY THAT UNDERLIES THE CONCEPT OF NITRATE VULNERABLE ZONES (NVZ) ARISING FROM THE EU NITRATE DIRECTIVE WHICH ARE AN ATTEMPT TO DEFINE LAND AREAS WHICH ARE MORE LIKELY TO SUFFER LEACHING OF NITRATES TO GROUNDWATER UNDER UNUSUAL CLIMATIC, HYDROLOGICAL AND AGRICULTURAL CONDITIONS. THIS, THE NEED TO MEASURE AND DEFINE NITRATE RESPONSES IN AN HIGH CONTEXT IS FUNDAMENTAL TO THIS APPROACH.	JOHNSTON	PAUL	UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TCD)			01-11-00	01-01-06	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	WETBALANCE	WASTEWATER; TREATMENT	THE UTILIZATION OF CONSTRUCTED WETLANDS FOR WASTE WATER TREATMENT IS INCREASING IN IRELAND. CONCERNS EXIST ABOUT LEAKAGE OF WASTEWATER AND POLLUTANTS TO GROUNDWATER. THIS DEMONSTRATION PROJECT WHICH IS UNIQUE NOT JUST FOR IRELAND BUT GLOBALLY WILL FOR THE FIRST TIME ASSESS THE FULL BALANCE FOR WATER AND POLLUTANTS OF A NEWLY CONSTRUCTED WETLAND FOR TREATMENT OF WASTEWATER FROM A DAIRY PROCESSING PLANT. THE WATER BALANCE WILL BE ASSESSED BY MONITORING INPUT FLOWS MOVEMENT TO/FROM GROUNDWATER EVAPOTRANSPIRATION AND OUTPUT FLOWS. THE POLLUTANT BALANCE WILL BE AFFECTED BY THE WATER MOVEMENT BUT ALSO DEPEND ON THE DEVELOPMENT OF THE WETLAND ECOSYSTEM. BECAUSE THIS IS A NEWLY CONSTRUCTED SYSTEM IT IS NOT EXPECTED TO OPTIMALLY REMOVE POLLUTANTS INITIALLY PARTICULARLY THOSE AFFECTED TO PLANT GROWTH IN P.E.C. BUT THIS WILL IMPROVE AS THE ECOSYSTEM MATURES OVER THE FIRST TWO YEARS. THE OUTCOMES OF THE RESEARCH WILL BE PRESENTED AT SCIENTIFIC CONFERENCES AND IN SCIENTIFIC JOURNALS BUT WILL ALSO BE MADE ACCESSIBLE TO ALL STAKEHOLDERS. IN ADDITION TO A TECHNICAL REPORT TO THE EPA A SUMMARY FOR LAI PERSONS WILL BE PREPARED. A DEDICATED WEBSITE WILL BE MAINTAINED WITH INFORMATION ABOUT THE PROJECT FOR SPECIALISTS AND NON-SPECIALISTS.	KELLY QUINN	MARY	UNIVERSITY COLLEGE DUBLIN (UCD)	SCHOOL OF BIOLOGY AND ENVIRONMENTAL SCIENCE		01-02-06	01-11-09	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	EUTROPHICATION FROM AGRICULTURAL SOURCES - PHOSPHORUS AND NITROGEN	EUTROPHICATION; PHOSPHORUS; NITROGEN	THIS DOCUMENT IS A SUMMARY OF THE CONCLUSIONS AND RECOMMENDATIONS THAT HAVE BEEN COMPILED FROM THOSE LISTED IN FINAL REPORTS SUBMITTED UNDER LES2-B (KOPHAYR). OTHER LAND USE CATEGORIES SUCH AS TILLAGED AND FORESTRY WERE IDENTIFIED FROM A LATTER REVIEW. SOIL TYPE WAS SHOWN TO AFFECT THE DRAINAGE PATTERNS AND P-CHEMISTRY OF GRASSLAND SOILS AND DRAINAGE CLASS AND CHEMICAL PARAMETERS SUCH AS SOM AND PH INFLUENCED THE QUANTITY AND QUALITY OF P EXPORTED IN CATCHMENTS. SATURATION EXCESS OVERLAND FLOW WAS IDENTIFIED AS THE DOMINANT FORM OF OVERLAND FLOW AND THE EXPANDING VARIABLE SOURCE AREA (VSA) HYDROLOGY WITH FREELY DISCHARGEABLE P WAS RESPONSIBLE FOR THE INCREASE IN P CONCENTRATION WITH FLOW IN OVERLAND FLOW MANAGEMENT. MANAGEMENT FACTORS AFFECTING P LOSS TO WATER IDENTIFIED IN THE RESEARCH INCLUDED THE PRESENCE OF GRAZING ANIMALS, TIMING OF SLURRY SPREADING, FERTILIZER USE AND SOIL P LEVELS. GRAZING AFFECTED THE QUANTITY AND QUALITY OF OVERLAND FLOW DUE TO COMPACTION AND THE PRESENCE OF THE GRAZING ANIMAL. GRAZING ANIMALS AND CUNING DEPOSITION AFFECTED CYCLING IN GRAZED PASTURES AND DUNG PATTS SIGNIFICANTLY INCREASED SOIL TEST P LEVELS AND TOTAL INORGANIC N IN SOIL. FERTILISER INPUTS AND SOIL P LEVELS IN	CARTON	OWEN	TEAGASC			01-11-00	01-04-06	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	ASSESSMENT OF DISPOSAL OPTIONS FOR TREATED WASTEWATER FROM SINGLE HOUSES LOW PERMEABILITY SUBSOIL	WASTEWATER; SINGLE HOUSES	THE PROPOSED RESEARCH IS TO PROVIDE SOLUTIONS TO THE PROBLEMS OF ON-SITE SYSTEMS IF PROBLEMATIC FACT SHEETS WITH DESIGN GUIDELINES FOR LPP AND DRIP FEED IN DIFFERENT SUBSOIL TYPES DESIGN GUIDELINES FOR WILLOW EVAPOTRANSPIRATION SYSTEMS RECEIVING ON-SITE WASTEWATER TREATMENT & DISPOSAL. GUIDELINES ON THE BEST METHOD TO USE FOR DETERMINING BEDROCK PERMEABILITY FOR DIFFERENT BEDROCKS RELATE LOW PERMEABILITY SUBSOILS IN IRELAND QUANTIFICATION OF EFFLUENT REDUCTION POTENTIAL USING WATER SAVING DEVICES SYNTHESIS OF ALL WORK PACKAGES IN A COHERENT REPORT TO THE EPA WHICH ADDRESSES THE OBJECTIVES OF THE PROJECT.	GILL	LAURENCE	UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TCD)			01-01-11	01-03-14	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	NEW NANOSTRUCTURED POLYMERIC MEMBRANES FOR THE TREATMENT AND PURIFICATION OF WATER	TECHNOLOGY; PURIFICATION; POLYMERIC MEMBRANES	MEMBRANE TECHNOLOGIES ARE AN ESTABLISHED MEANS FOR PRODUCING POTABLE WATER FROM SURFACE WATER, GROUNDWATER AND INDUSTRIAL WASTEWATERS. HOWEVER, EVEN THE BEST PERFORMING NANOFILTRATION MEMBRANES SUFFER FROM FOULING, LIMITING THEIR USEFULNESS IN WATER TREATMENT. WE PROPOSE TWO NEW RELATED STRATEGIES IN AN ATTEMPT TO ADDRESS THIS PROBLEM. THE FIRST INVOLVES CHEMICAL MODIFICATION OF POLYIMIDE (PI) NANOFILTRATION MEMBRANES WITH POLYMERIC BRUSHES SO THAT THE FOULING COMPONENTS ARE PREVENTED FROM REACHING THE MEMBRANE. THE SECOND APPROACH INVOLVES THE DEPOSITION OF POLY(PI) NANOFIBRES ONTO NYLON SUPPORTS AND USING THE EXCHANGE PROPERTIES OF THESE NANOFIBRES TO EXTRACT CATIONIC (HEAVY METAL) AND NITRATE FROM WATER. THIS RESEARCH ENCOMPASSES ELEMENTS OF SYNTHESIS, ELECTROCHEMISTRY, POLYMERIS, MEMBRANE TECHNOLOGIES, ENVIRONMENTAL NANOTECHNOLOGIES AND WATER TREATMENT AND IS HIGHLY NOVEL ACCORDINGLY, WE EXPECT THIS WORK TO LEAD TO THE PUBLICATION OF SIX PEER-REVIEWED PAPERS, SIX CONFERENCE PAPERS, THE ESTABLISHMENT OF NEW COLLABORATIVE LINKS WITH NATIONAL AND INTERNATIONAL ACADEMIC GROUPS, INDUSTRIAL RESEARCHERS AND POLICY MAKERS AND FORM THE BASIS FOR FUTURE POLICY DOCUMENTS ON WATER RESOURCES.	ROONEY	GENESE	NATIONAL UNIVERSITY OF IRELAND, MAYNOOTH (NUI)	DEPARTMENT OF CHEMISTRY		14-09-09	14-09-12	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	MOVING FROM PHYSICAL MEASURES OF WATER QUALITY TO USER VALUES	WATER BENEFIT INDEX; WATER VALUE	THE AIM OF THIS STUDY IS TO FIRSTLY DERIVE A WATER BENEFIT INDEX AND RELATE IT TO RIVER WATER QUALITY. THERE IS A BROAD SET OF ATTRIBUTES THAT CHARACTERISE OUR WATER RESOURCES AND TO CAPTURE THIS COMPLEXITY THIS STUDY WILL DEVELOP A SYSTEM THAT AWARDS POINTS TO EACH RIVER CATCHMENT BASED ON ITS DEGREE OF BENEFIT TO THE GENERAL PUBLIC. THE RANGE AND EXTENT OF BENEFITS (AND SUBSEQUENT SCORING) THAT CAN BE ATTRIBUTABLE TO EACH WATER BODY EXAMINED WILL BE INFORMED BY AN EXAMINATION OF THE QUALITY RATINGS OF WATER QUALITY PROVIDED BY THE EPA AND OTHER SITE CHARACTERISTICS. THIS STUDY WILL ALSO LINK PHYSICAL MEASURES OF RIVER WATER QUALITY WITH A NUMBER OF SPATIAL DATASETS RELATING TO AGRICULTURAL, RESIDENTIAL AND INDUSTRIAL ACTIVITIES AS WELL AS THE LEVEL OF FOREST COVER TO EXAMINE THE MAJOR ECONOMIC INFLUENCES ON THE ECOLOGICAL QUALITY OF WATERS. OVERALL THE INFORMATION STREAMING FROM THIS PROJECT CAN BE USED NOT ONLY TO HELP IRELAND MEET WATER QUALITY TARGETS BUT ALSO TO SHARP POLICY IN ORDER TO TAILOR RESOURCES AT AREAS THAT WOULD GENERATE THE GREATEST MARKET RETURN OR WELFARE GAIN. THREE REPORTS WILL BE PRESENTED TO THE EPA SUMMARISING THE RESULTS FROM	O'DONOHUE	CATHAL	TEAGASC			01-02-12	01-10-12	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	THE MICROBIOLOGICAL STATUS OF IRISH GROUNDWATER IN RELATION TO HUMAN HEALTH	DRINKING WATER; MICROBIOLOGICAL STATUS	BIOLOGICAL CONTAMINATION OF DRINKING WATER PRESENTS A SIGNIFICANT RISK TO HUMAN HEALTH. DRINKING WATER IS TRADITIONALLY AWAKED FOR CONTAMINATION BY BACTERIAL INDICATORS OF BIOLOGICAL CONTAMINATION, BUT DRINKING WATER DERIVED FROM GROUNDWATER IS NOT ROUTINELY TREATED PRIOR TO SUPPLY IN IRELAND. THIS PROJECT WILL DETERMINE THE MICROBIAL LOAD IN GROUNDWATERS FROM A NUMBER OF HYDROGEOLOGICAL SETTINGS, USING CULTURE-INDEPENDENT SCREENING. MICROBIAL OCCURRENCE IN GROUNDWATER WILL BE RELATED TO SUPPLY SITE CHARACTERISTICS AND HYDROGEOCHEMISTRY. SOURCES OF PATHOGENS WILL BE ASSESSED AT A NUMBER OF SITES AND RELATED TO POTENTIAL FOLLING ACTIVITIES. THE RISK TO HUMAN HEALTH POSSED BY CONTAMINATED GROUNDWATER WILL BE EVALUATED AND SUITABLE ABATEMENT/TREATMENT SYSTEMS WILL BE RECOMMENDED.	O'FLAHERTY	VINCENT	NATIONAL UNIVERSITY OF IRELAND GALWAY (NUIG)			01-11-03	01-10-09	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	WATER FRAMEWORK DIRECTIVE ACTED TESTING AND EVALUATION FELLOWSHIP	WATER FRAMEWORK DIRECTIVE; IMPLEMENTATION	THE PRIMARY GOAL OF THE WATER FELLOWSHIP IS TO PROVIDE HIGHLY APPLIED RESEARCH TO CONTRIBUTE TO A KEY ROLE IN THE NEXT PHASES OF WATER IMPLEMENTATION WITHIN THREE YEARS, CONCLUDING WITH THE DELIVERY OF BRIEFS BY 2009. TO ACHIEVE THIS GOAL, THE WATER FELLOWSHIP PROPOSES THE FOLLOWING KEY OBJECTIVES: (APPROX. 50% OF THESE DEVELOP CASE STUDIES AND BEST PRACTICE, LINKING WITH NATIONAL AND EUROPEAN RESEARCHERS, TO DEMONSTRATE HOW GROUNDWATER/SURFACE WATER INTERACTION ISSUES IN OBJECTIVE 1 REFLECTS TECHNICAL COMPETENCIES OF THE PROJECT LEADER. THIS RESEARCH WILL BUILD ON THE SIGNIFICANT CONTRIBUTION MADE IN THIS AREA DURING THE PFB PROJECT. A MINIMUM OF 3 DAYS PER WEEK WILL BE DEDICATED TO OBJECTIVE 1.	KELSOY	GARRETT	UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TCD)			03-01-06	03-01-09	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	THE IMPACT OF ON-SITE WASTEWATER TREATMENT FOR SMALL COMMUNITY DEVELOPMENTS ON GROUNDWATER	WASTEWATER SITE; WASTEWATER TREATMENT; GROUNDWATER	THE RESEARCH WILL EVALUATE THE IMPACT OF WASTEWATER TREATMENT SYSTEMS FOR SMALL COMMUNITY DEVELOPMENTS ON GROUNDWATER BY MONITORING UPSTREAM AND DOWNSTREAM OF FOUR CLUSTER DEVELOPMENTS IN AREAS OF DIFFERENT GROUNDWATER VULNERABILITY. THIS DATA AND RESULTS OF RECENT RESEARCH INTO ON-SITE DISCHARGES TO CONNECTING TO A CENTRALISED SEWERED SYSTEM.	GILL	LAURENCE	UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TCD)			02-11-09	02-11-12	ENVIRONMENTAL PROTECTION AGENCY	IRELAND

		ASSESSMENT OF ENVIRONMENTAL COMPLIANCE OF WATERBODIES THROUGH INTEGRATION OF MONITORING AND MODELLING	ENVIRONMENTAL COMPLIANCE; MODELLING	THIS RESEARCH WILL FOCUS ON DEVELOPING A METHODOLOGY FOR OPTIMISING WATER QUALITY MONITORING PROGRAMMES AND FOR DEVELOPING ASSURANCE PROCEDURES FOR WATER QUALITY COMPLIANCE OF LAKES AND ESTUARIES WITH EU AND NATIONAL LEGISLATION. THE APPROACH ADOPTED WILL BE GENERIC SO THAT THE METHODOLOGY CAN BE APPLIED TO DIFFERENT WATER QUALITY PARAMETERS AND DIFFERENT LEGISLATIVE INSTRUMENTS. THE PRIMARY OBJECTIVE OF THIS RESEARCH PROJECT IS TO INTEGRATE WATER QUALITY MONITORING DATA TOGETHER WITH MODEL PREDICTIONS TO PROVIDE IMPROVED MONITORING AND ESTIMATES OF WATER QUALITY PARAMETERS IN A COST-EFFECTIVE MANNER USING THE BAYESIAN MAXIMUM ENTROPY (BME) METHOD OF GEOSTATISTICS.	HARTNETT	MICHAEL	NATIONAL UNIVERSITY OF IRELAND GALWAY (NUIIG)			01-10-09	01-10-12	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
		MONITORING METHODOLOGIES FOR THE ECOLOGICAL ASSESSMENT OF LAKES	ECOLOGICAL ASSESSMENT; MONITORING	THE OVERALL OBJECTIVE OF THE PROJECT IS TO GATHER INFORMATION WHICH WILL ASSIST IN SELECTING SUITABLE LAKES FOR DRAWING UP BIOLOGICAL REFERENCE CONDITIONS AND TO DEVELOP AN ECOLOGICAL ASSESSMENT PROTOCOL FOR LAKES WHICH CAN BE MAINTAINED ON A LONG-TERM ECOLOGICAL ASSESSMENT UNIT FOR IRELAND. THE PROVISION OF A DETAILED ASSESSMENT OF THE LOGISTICS OF THE FIELD AND LABORATORY WORK INVOLVED IN THE ECOLOGICAL ASSESSMENT OF LAKES WILL RESULT IN THE PRESENTATION OF AN ESTIMATE OF THE COSTS OF ESTABLISHING AN ECOLOGICAL ASSESSMENT CAPABILITY. AT THE END OF THE PROJECT IT SHOULD BE POSSIBLE TO DEFINE A FULLY OPERATIONAL ECOLOGICAL ASSESSMENT PROGRAMME FOR IRISH LAKES UNDER THE EU WATER FRAMEWORK DIRECTIVE. THE ASSESSMENT TEAMS HAVE THE CAPABILITY TO PRODUCE REGULAR COMPREHENSIVE REPORTS ON LAKE ECOLOGICAL STATUS. REPORTING SYSTEMS WILL BE DATABASE DRIVEN AND WHICH MAKE EXTENSIVE USE OF DESKTOP GIS SYSTEMS. PROVISION OF ONLINE WORLD WIDE WEB (WWW) REPORTS WILL BE AN IMPORTANT PART OF THE REPORTING.	DOONNELLY	KAROL	NATIONAL UNIVERSITY OF IRELAND GALWAY (NUIIG)			09-10-00	09-10-04	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
		THE DEVELOPMENT OF LIQUID CHROMATOGRAPHY(MS) METHODS FOR THE DETERMINATION OF MICROCYSTINS IN RICH FRESHWATERS, CYANOBACTERIA AND DRINKING WATER.	MICROCYSTINS; CYANOBACTERIA; DRINKING WATER	LIQUID CHROMATOGRAPHY(MS) METHOD AND A TANDEM QUADRUPOLE TCMAS METHOD WILL ALSO BE USED FOR THE RAPID SCREENING OF MICROCYSTINS IN DRINKING WATER TO DETERMINE IF RICH DRINKING WATER IS COMPLIANT WITH THE WHO GUIDELINE ON MICROCYSTIN LEVELS/LABOR.	FUREY	AMBROSE	CORK INSTITUTE OF TECHNOLOGY (ICT)			01-10-02	01-07-06	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
		MONITORING METHODOLOGIES FOR THE ECOLOGICAL ASSESSMENT OF LAKES	ECOLOGICAL ASSESSMENT; MONITORING	THE OVERALL OBJECTIVE OF THE PROJECT IS TO GATHER INFORMATION WHICH WILL ASSIST IN SELECTING SUITABLE LAKES FOR DRAWING UP BIOLOGICAL REFERENCE CONDITIONS AND TO DEVELOP AN ECOLOGICAL ASSESSMENT PROTOCOL FOR LAKES WHICH CAN BE MAINTAINED ON A LONG-TERM ECOLOGICAL ASSESSMENT UNIT FOR IRELAND. THE PROVISION OF A DETAILED ASSESSMENT OF THE LOGISTICS OF THE FIELD AND LABORATORY WORK INVOLVED IN THE ECOLOGICAL ASSESSMENT OF LAKES WILL RESULT IN THE PRESENTATION OF AN ESTIMATE OF THE COSTS OF ESTABLISHING AN ECOLOGICAL ASSESSMENT CAPABILITY. AT THE END OF THE PROJECT IT SHOULD BE POSSIBLE TO DEFINE A FULLY OPERATIONAL ECOLOGICAL ASSESSMENT PROGRAMME FOR IRISH LAKES UNDER THE EU WATER FRAMEWORK DIRECTIVE. THE ASSESSMENT TEAMS HAVE THE CAPABILITY TO PRODUCE REGULAR COMPREHENSIVE REPORTS ON LAKE ECOLOGICAL STATUS. REPORTING SYSTEMS WILL BE DATABASE DRIVEN AND WHICH MAKE EXTENSIVE USE OF DESKTOP GIS SYSTEMS. PROVISION OF ONLINE WORLD WIDE WEB (WWW) REPORTS WILL BE AN IMPORTANT PART OF THE REPORTING.	FREE	GARY	UNIVERSITY COLLEGE DUBLIN (UCD)			20-11-00	20-11-04	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
		PHOTONUCLEATED ADVANCED OXIDATIVE PROCESSES (PAOP) FOR THE REMOVAL OF PATHOGENIC BACTERIA FROM DRINKING WATER.	DRINKING WATER; TREATMENT	ACCORDING TO THE EUROPEAN UNION DRINKING WATER DIRECTIVE, POTABLE WATER SHOULD NOT CONTAIN ANY MICROORGANISMS. A RECENT EPA REPORT, HOWEVER, REVEALED THAT A SIGNIFICANT NUMBER OF DRINKING WATER SUPPLIES CONTAIN E COLI NUMBERS THAT CONSTITUTE A POTENTIAL DANGER TO HUMAN HEALTH. THE ABILITY OF NOVEL UV ACTIVATED ADVANCED OXIDATIVE PROCESSES TO DISINFECT WATER WILL BE STUDIED. WATER CONTAMINATED WITH PATHOGENIC BACTERIA WILL BE SUBJECTED TO DIRECT PHOTOLYSIS, PHOTOCATALYSIS AND PHOTOSENSITIZATION UNDER A VARIETY OF ENVIRONMENTAL CONDITIONS. THESE DECONTAMINATION STUDIES WILL BE PERFORMED WITH ARTIFICIAL UV CULTURE TECHNIQUES.	QUILTY	BRID	DUBLIN CITY UNIVERSITY (DCU)			01-10-08	01-10-11	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
		MONITORING METHODOLOGIES FOR THE ECOLOGICAL ASSESSMENT OF LAKES	ECOLOGICAL ASSESSMENT; MONITORING	THE OVERALL OBJECTIVE OF THE PROJECT IS TO GATHER INFORMATION WHICH WILL ASSIST IN SELECTING SUITABLE LAKES FOR DRAWING UP BIOLOGICAL REFERENCE CONDITIONS AND TO DEVELOP AN ECOLOGICAL ASSESSMENT PROTOCOL FOR LAKES WHICH CAN BE MAINTAINED ON A LONG-TERM ECOLOGICAL ASSESSMENT UNIT FOR IRELAND. THE PROVISION OF A DETAILED ASSESSMENT OF THE LOGISTICS OF THE FIELD AND LABORATORY WORK INVOLVED IN THE ECOLOGICAL ASSESSMENT OF LAKES WILL RESULT IN THE PRESENTATION OF AN ESTIMATE OF THE COSTS OF ESTABLISHING AN ECOLOGICAL ASSESSMENT CAPABILITY. AT THE END OF THE PROJECT IT SHOULD BE POSSIBLE TO DEFINE A FULLY OPERATIONAL ECOLOGICAL ASSESSMENT PROGRAMME FOR IRISH LAKES UNDER THE EU WATER FRAMEWORK DIRECTIVE. THE ASSESSMENT TEAMS HAVE THE CAPABILITY TO PRODUCE REGULAR COMPREHENSIVE REPORTS ON LAKE ECOLOGICAL STATUS. REPORTING SYSTEMS WILL BE DATABASE DRIVEN AND WHICH MAKE EXTENSIVE USE OF DESKTOP GIS SYSTEMS. PROVISION OF ONLINE WORLD WIDE WEB (WWW) REPORTS WILL BE AN IMPORTANT PART OF THE REPORTING.	CARONI	ROSANNA	UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TCD)			20-11-00	20-11-04	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	EFFECT	AN EFFECTIVE FRAMEWORK FOR ASSESSING AQUATIC ECOSYSTEM RESPONSES TO IMPLEMENTATION OF THE PHOSPHORUS REGULATIONS (EFFECT)	PHOSPHORUS; ECOSYSTEMS	FOR A TOTAL GRANT OF 325,052.50, AND THROUGH THE COLLECTION AND COLLATION OF NEW AND EXISTING ENVIRONMENTAL AND SOCIOLOGICAL SCIENCE WITH AN INNOVATIVE QUALITY MANAGEMENT (QMS) STRATEGY FOR WATER QUALITY MANAGEMENT THROUGH THE USE OF DELIBERATIVE TECHNIQUES. 1) DEDICATED EFFECT PROJECT WEBSITE AND PRESS RELEASE 2) REPORTS TO EPA. 3 MONTHLY REPORTS/STATUS REPORTS STRATEGY FOR PROTECTING IMPROVING WATER QUALITY.	TAYLOR	DAVID	UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TCD)			01-04-08	01-04-11	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
		AN INVESTIGATION OF THE HEALTH RISKS ASSOCIATED WITH PRIVATE RURAL WELL SCHEMES IN IRELAND	DRINKING WATER; HEALTH	THE SUBJECT OF THIS RESEARCH IS THE HEALTH RISKS ASSOCIATED WITH SMALL PRIVATE RURAL DRINKING WATER SCHEMES IN IRELAND. METHODOLOGIES APPLIED IN THE USA AND ELSEWHERE WOULD BE APPLIED TO EXISTING WATER QUALITY DATA FROM IRELAND TO QUANTIFY THE HEALTH RISKS, ESPECIALLY WITH RESPECT TO MICROBIAL CONTAMINATION. THESE RISKS WOULD BE LINKED TO THE VULNERABILITY TO POLLUTION OF THE WATER SOURCES. THE PROJECT WILL FOCUS ON GROUNDWATER SOURCES, SINCE THESE ARE THE MOST NUMEROUS WATER SOURCES FOR PRIVATE SCHEMES. GUIDELINES WILL BE PRODUCED FOR THE PRIVATE CONSUMER ON HOW TO LOCATE, IMPLEMENT AND OPERATE NEW WELL SCHEMES. THIS GUIDANCE WILL TAKE ACCOUNT OF THE LEVEL OF PUBLIC AWARENESS ABOUT WATER CONTAMINATION AND HEALTH, WHICH WILL BE DETERMINED IN THE PROJECT BY CARRYING OUT SURVEYS OF PRIVATE WELL OWNERS ATTITUDES AND AWARENESS.	MISSTAR	BRUCE	UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TCD)	SCHOOL OF CIVIL ENGINEERING		01-04-06	01-04-09	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
		DEVELOPMENT OF REMOTE SENSING AS A TOOL FOR DETECTION, QUANTIFICATION AND EVALUATION OF SUBMARINE GROUNDWATER DISCHARGE (SGD) TO HIGH COASTAL WATERS	COASTAL WATER; REMOTE SENSING	SUBMARINE GROUNDWATER DISCHARGE (SGD) IS RECEIVING CONSIDERABLE ATTENTION IN THE LITERATURE AS A MAJOR PATHWAY FOR ANTHROPOGENICALLY DERIVED POLLUTANTS TO COASTAL WATERS. THE SPECIFIC GOAL OF THIS RESEARCH IS TO DEVELOP REMOTE SENSING AS A TOOL IN THE IDENTIFICATION, QUANTIFICATION AND MAPPING OF SGD. THE PRINCIPAL MEANS OF THE ASSESSMENT WILL BE VIA THERMAL INFERRED REMOTE SENSING FOR TWO CASE-BASED MEASUREMENTS OF NUTRIENTS, TEMPERATURE, CONDUCTIVITY (SALINITY AND NATURAL CHEMICAL INDEXES OF GROUNDWATER DISCHARGE (ZZI)) TO ASSESS THE IMPACT OF SGD. THE STUDY AIMS TO IMPROVE UNDERSTANDING OF THE PATHWAYS AND DISCHARGE OF CONTAMINANTS VIA SGD INTO IRISH COASTAL WATERS.	WILSON	JEAN	UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TCD)			01-04-09	01-04-12	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
		MONITORING METHODOLOGIES FOR THE ECOLOGICAL ASSESSMENT OF LAKES	ECOLOGICAL ASSESSMENT; MONITORING	THE OVERALL OBJECTIVE OF THE PROJECT IS TO GATHER INFORMATION WHICH WILL ASSIST IN SELECTING SUITABLE LAKES FOR DRAWING UP BIOLOGICAL REFERENCE CONDITIONS AND TO DEVELOP AN ECOLOGICAL ASSESSMENT PROTOCOL FOR LAKES WHICH CAN BE MAINTAINED ON A LONG-TERM ECOLOGICAL ASSESSMENT UNIT FOR IRELAND. THE PROVISION OF A DETAILED ASSESSMENT OF THE LOGISTICS OF THE FIELD AND LABORATORY WORK INVOLVED IN THE ECOLOGICAL ASSESSMENT OF LAKES WILL RESULT IN THE PRESENTATION OF AN ESTIMATE OF THE COSTS OF ESTABLISHING AN ECOLOGICAL ASSESSMENT CAPABILITY. AT THE END OF THE PROJECT IT SHOULD BE POSSIBLE TO DEFINE A FULLY OPERATIONAL ECOLOGICAL ASSESSMENT PROGRAMME FOR IRISH LAKES UNDER THE EU WATER FRAMEWORK DIRECTIVE. THE ASSESSMENT TEAMS HAVE THE CAPABILITY TO PRODUCE REGULAR COMPREHENSIVE REPORTS ON LAKE ECOLOGICAL STATUS. REPORTING SYSTEMS WILL BE DATABASE DRIVEN AND WHICH MAKE EXTENSIVE USE OF DESKTOP GIS SYSTEMS. PROVISION OF ONLINE WORLD WIDE WEB (WWW) REPORTS WILL BE AN IMPORTANT PART OF THE REPORTING.	LITTLE	RUTH	UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TCD)			26-10-00	26-10-04	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
		HIGH STRENGTH INDUSTRIAL WASTEWATERS	WASTEWATER; ANAEROBIC DIGESTION	ANAEROBIC DIGESTION (AD) IS A BIOLOGICAL PROCESS OF WASTE TREATMENT WHICH CONVERTS ORGANIC MATTER TO BIOMAS, A USABLE FUEL AND A RENEWABLE ENERGY SOURCE. THE PROCESS OCCURS IN BIOREACTORS WHERE THE MICROBES WHICH CARRY OUT THE PROCESS ARE RETAINED AS BIOPILMS. AD IS AN ESTABLISHED SUSTAINABLE WASTE TREATMENT TECHNOLOGY FOR RESIDUES FROM VARIOUS SOURCES INCLUDING INDUSTRIAL PROCESSES AND AGRICULTURE. IT HAS ADVANTAGES OVER THE CONVENTIONAL AEROBIC TREATMENT APPROACH INCLUDING LOWER CAPITAL AND OPERATING COSTS. TO DATE AD HAS NOT BEEN APPLIED FOR DIRECT TREATMENT OF MUNICIPAL WASTEWATER OR DOMESTIC SEWAGE DUE MAINLY TO CONCERNS REGARDING THE STABILITY AND EFFICIENCY OF LOW TEMPERATURE AD FOR MUNICIPAL WASTEWATER TREATMENT UNDER WARM CONDITIONS. IF SUCCESSFUL THIS INNOVATIVE APPROACH WITH AD AS THE CORE TECHNOLOGY FOR MUNICIPAL WASTEWATER TREATMENT WILL REVOLUTIONISE THE FIELD OF WASTEWATER TREATMENT BRINGING A MAJOR COMMERCIAL AND TECHNOLOGICAL OPPORTUNITY AND FACILITATE FUTURE SUSTAINABLE DEVELOPMENT IN IRELAND.	O'FLAHERTY	VINCENT	NATIONAL UNIVERSITY OF IRELAND GALWAY (NUIIG)			01-02-06	01-12-09	ENVIRONMENTAL PROTECTION AGENCY	IRELAND

	ONE STEP DRINKING WATER TREATMENT USING NANOFILTRATION AND NANOSTRUCTURED COMPOSITES	DRINKING WATER, NANOFILTRATION	THE AIM OF THIS PROJECT IS TO DEVELOP AN INNOVATIVE ONE-STEP NANOCOMPOSITE WILL BE DEVELOPED ON THE SUBSTRATE SURFACE AND AN OPERATIONAL ASSESSMENT WILL BE PERFORMED ON THE SYSTEM, AND THIS NOVEL, HIGHLY COMMERCIALISABLE TECHNOLOGY WILL BE DEVELOPED FROM SMALL SCALE THROUGH TO 30L SCALE WITH EXTENSIVE TESTING IN THE FIELD IN CONJUNCTION WITH OUR INDUSTRIAL PARTNERS. THE OUTPUTS FROM THIS PROJECT INCLUDE THE PUBLICATION OF AT LEAST FIVE RESEARCH PAPERS, ONE PATENT, PATENT APPLICATION AND ONE COMMERCIALISABLE TECHNOLOGY DEVELOPED IN CONJUNCTION WITH OUR INDUSTRIAL PARTNERS. IN ADDITION, ONE PhD CANDIDATE WILL GRADUATE AND A POST DOCTORAL RESEARCHER WILL HAVE RECEIVED THREE YEARS OF TRAINING. SUCCESS IN THIS PROJECT WILL ENABLE THE LEAD TO APPLY FOR FUNDING FOR CONTINUATION PROJECTS WITH FPP PARTNERS. FINALLY, A MORE RELIABLE DRINKING WATER TREATMENT SYSTEM WILL BE DEVELOPED FOR SMALL RURAL WATER SCHEMES WHICH CAN BE EXPANDED TO INCLUDE APPLICATIONS IN COUNTRIES WHERE CLEAN DRINKING WATER IS A NATIONAL PROBLEM	MORRISSEY	ANNE	DUBLIN CITY UNIVERSITY (DCU)			01-03-12	01-06-15	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	ANTIMICROBIAL RESISTANT ENTEROCOCCI (ARE) IN IRISH WATERS: SOURCES, TRANSFERS AND IMPACTS	RECREATIONAL WATER, ANTIMICROBIAL RESISTANT ENTEROCOCCI	ANTIMICROBIAL RESISTANT ENTEROCOCCI (ARE) ARE INCREASINGLY IMPORTANT PATHOGENS. YET ENVIRONMENTAL DATA ARE SCARCE. WE WILL EXPLORE ARE SOURCES, TRANSFERS AND POTENTIAL IMPACTS ON RECREATIONAL WATERS, ARE OCCURRING OR WIDESPREAD IN SUBCATCHMENTS OF THE BLACKWATER RIVER. THEY WOULD POSE A HEALTH HAZARD IF THEY WERE TRANSFERRING TO LOUGH NEAHE. THE PROJECT INCLUDES SAMPLING DAILY CYCLES DURING LOW FLOWS AND FLOOD EVENTS IN HEADWATER AND A SIMILAR REGIME FOR LOUGH NEAHE. MOLECULAR EPIDEMIOLOGICAL METHODS (MLST) WILL BE USED FOR ARE SOURCE TRACKING, SURVIVAL TIMES AND RESSOCIATION POTENTIAL OF ENTEROCOCCI STRAINS WILL BE DETERMINED TO ASSESS THEIR POTENTIAL THREAT IN WATER.	DOOLEY	JAMES	UNIVERSITY OF LISTER			05-11-07	05-11-10	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
GROUNDWATER FAUNA	DISTRIBUTION, STRUCTURE AND FUNCTIONING OF SUBTERRANEAN FAUNA WITHIN IRISH GROUNDWATER SYSTEMS	GROUNDWATER, FAUNA	BUILDING ON THE EXPERIENCE OF A PILOT SURVEY IN 2006, THIS INVESTIGATION AIMS TO EXPLORE THE BIODIVERSITY OF IRELAND'S SUBTERRANEAN FAUNA. IRELAND WILL BE SCANNED FOR AQUATIC FAUNA IN SUBTERRANEAN FRESHWATER HABITATS. RESULTING DATA ON DISTRIBUTION, FREQUENCY AND DIVERSITY IN SUBTERRANEAN FAUNA AND THEIR RESPONSE TO ABiotic PARAMETERS WILL IN THE FOUNDATION FOR FUTURE STUDIES ON GROUNDWATER ECOLOGY AND BIODIVERSITY. THE STUDY WILL ALSO INFORM ON SPATIAL AND TEMPORAL HETEROGENEITY WITH REGARD TO THE DISTRIBUTION OF FAUNA IN ADIFERS AND WILL INVESTIGATE STRUCTURE AND FUNCTIONING OF THE KEY GROUNDWATER SPECIES NIPHARGILUS KOCHANUS IRLANDICUS. FOUR PEER REVIEWED PUBLICATIONS, ONE LITERATURE REVIEW, INTERMEDIATE REPORTS AND ONE FINAL REPORT FOR THE ENVIRONMENTAL PROTECTION AGENCY WILL BE PRODUCED. A DEDICATED PROJECT WEBSITE WILL BE CONSTRUCTED. A DATABASE ON SAMPLING SITES, HYDROGEOLOGY, HYDROLOGY, WATER CHEMISTRY AND BIOLOGICAL DATA WILL BE BUILT AND MADE AVAILABLE TO THE AGENCY AND BE COMPATIBLE WITH EXISTING GIS DATABASES.	ARNSCHIEDT	JOERG	UNIVERSITY OF LISTER	DEPT. OF HYDROLOGY		01-03-08	01-03-11	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
SAOJEE	SAOJEE CONTACT RECREATION	COASTAL WATERS, DISPOSAL, OYSTERS	SEWAGE EFFLUENT IN COASTAL WATERS USED FOR OYSTER CULTURE AND WATER-OPERATIVE STRESS, THE VERY YOUNG AND VERY OLD. AN INFECTED PERSON MAY EXCRETE 0.15 BILLION HEPATITIS VIRUSES PER DAY TO THE SEWER SYSTEM. THE GOALS ARE TO QUANTIFY THE RISK OF INFECTION THROUGH COASTAL WATERS, (B) EVALUATE POSSIBLE CONTAMINATION OF TREATED SEWAGE EFFLUENT, RATHER THAN DILUTION, AND (C) TO MAKE A PROTOTYPE EARLY ALERT SYSTEM.	CREED	MICHAEL	UNIVERSITY COLLEGE CORK (UCC)			01-10-07	01-10-10	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	EVALUATION AND INTERPRETATION OF GROUNDWATER MONITORING DATA AND THE IMPLICATIONS FOR GROUNDWATER IN IRELAND	WATER FRAMEWORK DIRECTIVES; MONITORING DATA, EVALUATION	THE PROPOSED RESEARCH WILL PROVIDE THE EPA WITH A BETTER UNDERSTANDING OF GROUNDWATER MONITORING AND QUALITY DATA IN IRELAND. THIS RESEARCH WILL ALLOW THE EPA TO BETTER FULFIL THE OBLIGATIONS OF CURRENT EUROPEAN LEGISLATION, NAMELY THE WATER FRAMEWORK AND GROUNDWATER DIRECTIVES. THE RESEARCH WILL COMPRISE (I) A LITERATURE AND DATA REVIEW AND THE DEVELOPMENT OF SUITABLE DATABASES, (II) A ROUTINE SET OF DATA CHECKS AND ANALYSES IN ORDER TO PRODUCE A STANDARD SET OF REPORTS SUITABLE FOR PUBLICATION IN THE EPA WEBSITE AND (III) A NUMBER OF FOCUSED INVESTIGATIONS INTO TOPICS OF PARTICULAR RELEVANCE TO IRISH HYDROGEOLOGY.	TEOD	KATE	UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TD)			01-09-08	01-09-11	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	DEVELOPMENT OF AN ALUM SLAGGE BASED CONSTRUCTED WETLAND SYSTEM FOR IMPROVING ORGANIC MATTER AND NUTRIENTS REMOVAL IN HIGH STRENGTH WASTEWATER	WASTEWATER, ALUM SLAGGE	CONSTRUCTED WETLANDS (CW) HAS BEEN WIDELY USED AS A POPULAR ALTERNATIVE FOR THE TREATMENT OF VARIOUS WASTEWATERS DUE TO ITS VIABILITY, LOW OPERATING COST AND 'GREEN' IMAGE. HOWEVER CHALLENGES FOR CW TECHNOLOGY TO TREAT HIGH STRENGTH WASTEWATERS HAVE ARISEN DUE TO THE RAPID GROWTH OF POPULATION AND INDUSTRIAL ACTIVITIES IN RECENT YEARS. THE PROPOSED STUDY AIMS TO DEVELOP A NOVEL AND INNOVATIVE CW SYSTEM TO ENHANCE ORGANIC MATTER AND NUTRIENTS REMOVAL WHEN HIGH STRENGTH WASTEWATER IS TREATED.	ZHANG	YAGAN	UNIVERSITY COLLEGE DUBLIN (UCD)			01-06-06	30-10-10	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	HIGHWAY DRAINAGE, RUNOFF	HIGHWAY DRAINAGE/WATER QUALITY	OBJECTIVES: THE PROJECTS OBJECTIVES ARE DIVIDED INTO TWO COMPONENTS 1(A). REVIEW EXISTING PRACTICE WITH RESPECT TO ROAD DRAINAGE DESIGN AND MAINTENANCE FOR RURAL DUAL CARROGWAYS AND MOTORWAYS IN IRELAND AND THE ASSESSMENT OF ANY ENVIRONMENTAL IMPACTS OF SUCH RUNOFF. SET THIS PRACTICE IN THE CONTEXT OF CURRENT PRACTICE ELSEWHERE IN EUROPE. 1(B). IDENTIFY SUITABLE CANDIDATE SITES FOR MONITORING FLOW AND QUALITY OF ROAD DRAINAGE WATERS. SELECT AT LEAST TWO FOR DETAILED MONITORING. 2(A). SET UP AND OPERATE AT LEAST TWO REPRESENTATIVE ROAD DRAINAGE SUB-CATCHMENTS WITH INSTRUMENTATION FOR MONITORING RATES OF RUNOFF AND CORRESPONDING QUALITY FOR A RANGE OF INDICATIVE PARAMETERS. 2(B). ANALYSE FLOW, VOLUME AND QUALITY DATA, SO AS TO BE ABLE TO PREDICT LINKS BETWEEN PEAK VOLUMES AND QUALITY FROM PRE-DETERMINED DESIGN RAINFALLS. 3. A BASELINE HYDROLOGICAL/ECOLOGICAL SURVEY OF RECEIVING WATERS WILL BE UNDERTAKEN TO ESTABLISH BASIC ECOLOGICAL STATUS. THIS WILL INCLUDE MACROINVERTEBRATE, FISH AND AQUATIC FLORA. THEREAFTER MACROINVERTEBRATE SAMPLES WILL BE COLLECTED AT REGULAR INTERVALS AND AT ADDITIONAL PERIODS FOLLOWING SPOTFC.	BRUEN	MICHAEL	UNIVERSITY COLLEGE DUBLIN (UCD)	CENTRE FOR WATER RESOURCES RESEARCH		01-12-01	01-09-06	ENVIRONMENTAL PROTECTION AGENCY; NATIONAL ROAD AUTHORITIES	IRELAND
	QOMRA APPROACH TO ESTIMATE PUBLIC HEALTH RISKS CAUSED BY MICROBES ASSOCIATED WITH BEACH SANDS	BATHING WATER, BEACH SAND, MICROBES	RECREATIONAL USE OF BATHING AREAS IN IRELAND PREDOMINANTLY TAKES PLACE ON BEACHES, IN PARTICULAR ON SANDY BEACHES. ALTHOUGH IT HAS BEEN RECOGNISED THAT BEACHES MAY BE CONTAMINATED BY FAECAL INDICATOR BACTERIA AND PATHOGENIC MICROBES, IT IS UNCLEAR WHAT RISK CONTAMINATED BEACH SANDS POSE TO THE GENERAL PUBLIC. THE QUALITY OF BATHING WATERS IN THE EUROPEAN UNION IS GOVERNED BY THE REVISED BATHING WATER DIRECTIVE (BWD). IN ADDITION TO THE STANDARDS APPLYING TO WATER QUALITY, THE BWD ALSO EMPHASISES THE QUALITY OF THE ENTIRE BATHING SITE, WHICH INCLUDES THE BEACH AREA. LOCAL AUTHORITIES ARE REQUIRED TO CONDUCT BATHING WATER PROFILES, DESCRIBING ANY SITUATION THAT COULD HAVE A NEGATIVE IMPACT ON PUBLIC HEALTH, AND TO UNDERTAKE MANAGEMENT MEASURES TO LIMIT THESE PUBLIC HEALTH RISKS. THIS PROJECT COMBINES A MICROBIAL ANALYSIS OF BEACH SANDS WITH A QUANTITATIVE MICROBIAL RISK ASSESSMENT APPROACH. THE PROJECT STUDIES THE ASSOCIATION OF FAECAL INDICATOR BACTERIA AND PATHOGENIC MICROBES WITH SAND PARTICLES OF DRY AND WET BEACHES. THE PROJECT WILL IDENTIFY HEALTH RISKS ASSOCIATED WITH BEACH SAND CONTAMINATED BY FAECES AND PATHOGENIC MICROBES, WILL IDENTIFY APPROPRIATE MANAGEMENT MEASURES TO REDUCE THESE HEALTH RISKS AND WILL	MUIR	WIM. G.	UNIVERSITY COLLEGE DUBLIN (UCD)	UNIVERSITY COLLEGE DUBLIN		01-02-12	01-03-15	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	ASSESSING THE IMPACT OF WASTE WATER TREATMENT PLANT EFFLUENT ON NONOVIRUS CONTAMINATION IN SHELLFISHERIES	SHELLFISH WATER, NONOVIRUS	NONOVIRUS (NOV) IS THE LEADING CAUSE OF GASTROENTERITIS IN THE GENERAL POPULATION. NOV CONTAMINATION OF SHELLFISHERIES PRESENTS A SIGNIFICANT PUBLIC HEALTH RISK. THIS STUDY WILL COMPARE NOV SURVIVAL DURING SEWAGE TREATMENT AND IN SEAWATER ALONGSIDE INDICATOR ORGANISMS. THE IMPACT OF SEWAGE DISCHARGES ON NOV CONTAMINATION IN SHELLFISHERIES WILL BE ASSESSED. IN A PEER REVIEWED PAPER.	DORE	BILL	MARINE INSTITUTE	MARINE INSTITUTE		01-10-08	01-10-11	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	TOWARDS DEVELOPING A MICROBIAL RISK ASSESSMENT/FORECAST MODEL FOR CRYPTOSPORIDIOSIS	DRINKING WATER, MICROBIAL RISK ASSESSMENT, MODEL	A TRIAL MICROBIAL RISK ASSESSMENT WILL BE DEVELOPED USING GIS FOR A WATER SOURCE IN A MUNICIPAL WATER SYSTEM TO IDENTIFY WHEREBETWEEN WILL BE AT A HIGH RISK OF BEING CONTAMINATED WITH ZOONOTIC ENTERIC PATHOGENS VIA SURFACE PATHWAYS. CRYPTOSPORIDIUM SPP. OOCYSTS WILL BE USED AS THE INDICATOR ORGANISM. THE DATA LAYERS IN THE GIS WILL INCLUDE: 1. SOIL SPATIAL ANALYSIS WITHIN THE GIS WILL BE USED TO ESTIMATE PROBABILITY OF THE TRANSPORT VECTOR BEING ACTIVE FROM SOURCE TO TARGET. MONTE CARLO SIMULATION WILL BE USED TO DETERMINE THE RISK OF CONTAMINATION OF POTABLE WATER IN THE TRIAL AREA.	HOLDEN	NICHOLAS	UNIVERSITY COLLEGE DUBLIN (UCD)	SCHOOL OF AG FOOD & VET MEDICINE		01-01-06	01-01-10	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	AN INVESTIGATION INTO THE EFFECTIVE DISTRIBUTION OF ON-SITE WASTEWATER EFFLUENT IN TO PERCOLATION AREAS AND THE TREATMENT PERFORMANCE OF SANDY SUBSTRATA UNDER VARIOUS RECHARGE AND GROUNDWATER VULNERABILITY	WASTEWATER, PERCOLATION, WETLANDS	THE SAFE DISPOSAL OF ON-SITE WASTEWATER TREATMENT AT THIS STAGE WHICH WOULD HOPEFULLY BE COMBODATED BY FURTHER RESEARCH IN THE FUTURE.	GILL	LAURENCE	UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TD)			01-01-05	01-05-09	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	RECHARGE AND GROUNDWATER VULNERABILITY	GROUNDWATER, VULNERABILITY	THE OBJECTIVES ARE TO: 1. REVIEW AND EVALUATE CURRENT METHODS FOR THE ESTIMATION OF GROUNDWATER RECHARGE AT SUB-CATCHMENT/SCALE FOR GROUNDWATER VULNERABILITY AND AQUIFER POTENTIAL. 4. DEVELOP A PRELIMINARY GIS BASED ASSESSMENT TOOL FOR THE ESTIMATION OF GROUNDWATER RECHARGE (RECHARGE ACCESSIBILITY).	MISSTAR	BRUCE	UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TD)	SCHOOL OF CIVIL ENGINEERING		27-01-03	27-03-07	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	LIMNOLOGICAL RESPONSES TO LAKE WATER DISSOLVED ORGANIC CARBON (DOC)	LAKES; DOC; PALAEOECOLOGY	A TREND OF INCREASING DISSOLVED ORGANIC CARBON IN SURFACE WATERS HAS BEEN DOCUMENTED FOR AREAS OF NORTHERN EUROPE AND NORTH AMERICA IN THE LAST 15-20 YEARS. SEVERAL HYPOTHESES HAVE BEEN PROPOSED TO EXPLAIN THESE INCREASES INCLUDING LAND USE CHANGES, DECLINES IN AOD DEPOSITION AND ANTHROPOGENIC CLIMATIC CHANGE, INCREASED COLOUR AND HUMIC CONTENT OF SURFACE WATERS HAS POTENTIALLY CRITICAL EFFECTS ON AQUATIC ECOSYSTEMS AS WELL AS ON DRINKING WATER PRODUCTION. THIS RESEARCH WILL HELP ESTABLISH THE PRESENT ECOLOGICAL RESPONSE IN BACTERIOPHAGANTION AND PHYTOPLANKTON POPULATIONS AND THE RECENT PALAEOECOLOGY OF TWO LAKE SYSTEMS. (I) EVALUATE CHANGE IN SYSTEM STATE, (II) ASSESS THE ECOLOGICAL RESPONSE TO INCREASES IN THE DOC-STRESSOR AND (IV) EVALUATE THE POTENTIAL ROLES OF LAND USE CHANGES, DECLINES IN AOD DEPOSITION, CLIMATE CHANGE AND HELP INFORM PREDICTIONS OF FUTURE STATE.	DALTON	CATHERINE	UNIVERSITY OF LIMERICK (UL)			01-10-08	01-10-11	ENVIRONMENTAL PROTECTION AGENCY	IRELAND

	LEGAL ISSUES RELATING TO THE ADMISSIBILITY IN EVIDENCE OF ENVIRONMENTAL DATA GATHERED BY MEANS OF REMOTE SAMPLING AND SELF-MONITORING TECHNOLOGIES THE CASE OF WATER QUALITY SAMPLING	WATER QUALITY SAMPLING/MONITORING TECHNOLOGIES	THE REQUIREMENTS IN RELATION TO ENVIRONMENTAL SAMPLING UNDER EUROPEAN COMMUNITY AND IRISH LAW ARE NOT CLEARLY PRESENT. DIRECTIVE 79/90/EEC (AS AMENDED) SETS SOME MINIMAL, THOUGH EXCLUDABLE, REQUIREMENTS RELATING TO REFERENCE METHODS AND FREQUENCIES OF SAMPLING AND ANALYSIS. SECTION 2(1) OF THE 1977 LOCAL GOVERNMENT (WATER POLLUTION) ACT REQUIRES A LOCAL OR SANITARY AUTHORITY TO CARRY OUT SUCH MONITORING OF WATERS OR DISCHARGES OF EFFLUENTS AS IT CONSIDERS NECESSARY OR AS MAY BE DIRECTED BY THE MINISTER. WHILE SECTION 2(1) CONFERES BROAD POWERS TO ENTER PREMISES TO CARRY OUT INSPECTIONS OR TAKE SAMPLES, HOWEVER, DESPITE THE LACK OF A FORMAL STATUTORY REQUIREMENT TO CARRY OUT 'SPLIT SAMPLING', THE IRISH COURTS WOULD APPEAR TO BE MOVING TOWARDS INTRODUCING A REQUIREMENT SIMILAR TO THE 'TRIPPLICATE SAMPLING REQUIREMENT' PREVIOUSLY CONTAINED UNDER WATER LEGISLATION. THE COURTS ARE TAKING THIS APPROACH REGARDLESS OF THE PROBLEMS THAT THIS MIGHT CAUSE FOR EFFECTIVE ENFORCEMENT OF ENVIRONMENTAL LAW AND DESPITE THE COMPREHENSIVE REPEAL OF THIS REQUIREMENT UNDER UK LAW. THIS APPROACH RAISES A NUMBER OF CRITICAL ISSUES REGARDING THE ADMISSIBILITY OF EVIDENCE GATHERED USING REMOTE / AUTOMATIC	MONTEYRE	OWEN	UNIVERSITY COLLEGE COBK (UCC)			01-11-07	01-11-10	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	PILOT RIVER BASIN	WATER FRAMEWORK DIRECTIVE; CATCHMENT MANAGEMENT	THE WATER FRAMEWORK DIRECTIVE (WFD) WILL FOR THE FIRST TIME PROVIDE A COMPREHENSIVE LEGISLATIVE BASIS FOR THE PROTECTION, ENHANCEMENT AND REGULATION OF WATER QUALITY AND QUANTITY FOR RIVERS, LAKES, ESTUARIES, COASTAL WATERS AND GROUND WATERS IN THE EUROPEAN UNION. FUNDAMENTAL TO THE SUCCESSFUL IMPLEMENTATION OF THE WFD WILL BE THE ESTABLISHMENT OF RIVER BASIN DISTRICTS AND RIVER BASIN MANAGEMENT PLANS, WHICH WILL REQUIRE AN INTEGRATED APPROACH TO CATCHMENT MANAGEMENT. THE DEVELOPMENT OF GUIDANCE DOCUMENTS FROM WORKING GROUPS AT EU LEVEL WILL FORM THE BASIS FOR A COMMON STRATEGY FOR THE WFD. TO ENSURE COHERENCE BETWEEN THE DIFFERENT GUIDANCE DOCUMENTS AND CROSS APPLICABILITY, THE GUIDANCE DOCUMENTS WILL BE TESTED IN SELECTED PILOT RIVER BASINS (PRB). THE PROPOSED PRB FELLOWSHIP WILL CONTRIBUTE, FROM AN IRISH PERSPECTIVE, TO ENSURING THAT THE GUIDANCE DOCUMENTS ARE APPLICABLE TO AND WORKABLE WITHIN ALL RIVER BASIN DISTRICTS ACROSS EUROPE. IRELAND HAS PROPOSED THE SHANNON RIVER BASIN AS THE PRB. KEY TO THE ASSESSMENT OF THIS GUIDANCE DOCUMENTS WILL BE COLLABORATION WITH PARTICIPANTS OF THE SHANNON RIVER BASIN DISTRICT PROJECT. IN ADDITION, CONTACT WILL BE MAINTAINED WITH WFD WORKING GROUPS, REPRESENTATIVES	KILROY	GABRIEL	UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TCD)			02-12-02	02-12-05	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	HYDROGEOLOGICAL AND GEOCHEMICAL INVESTIGATIONS OF ELUVIATED ARSENIC (AS) MINORIONS IN GROUNDWATER WELLS FROM THE WEST OF IRELAND	GROUNDWATER; ARSENIC; AS	THIS STUDY WILL USE HYDROGEOLOGY, GEOCHEMISTRY AND CHEMICAL SPECIATION STUDIES TO INVESTIGATE THE FATE OF ELUVIATED ARSENIC (AS) MINORIONS IN A SIGNIFICANT NUMBER OF GROUNDWATER WELLS FROM THE CLON BAY AREA, WESTERN IRELAND. COMPARATIVE STUDIES OF GROUNDWATER, BEDROCK AND MINERAL CHEMISTRY WILL BE LINKED TO HYDROGEOLOGY, GIS AND STATISTICAL STUDIES. THIS APPROACH WILL FACILITATE CHARACTERIZATION OF THE TEMPORAL AND SPATIAL DISTRIBUTION OF AS AS A FUNCTION OF GROUNDWATER AND BEDROCK GEOLOGY USING THE PRESSURES, PATHWAYS AND RECEPTORS APPROACH. ARSENIC SPECIATION STUDIES WILL DETERMINE AS TOXICITY, BIOAVAILABILITY AND POTENTIAL FOR MOBILIZATION IN THIS ENVIRONMENT THIS ADDRESSING HUMAN HEALTH ISSUES.	FELLY	MARTIN	NATIONAL UNIVERSITY OF IRELAND GALWAY (NUIG)			01-10-08	01-10-11	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	NITROGEN REMOVAL FROM SLAUGHTERHOUSE WASTEWATER BY MEANS OF SIMULTANEOUS NITRIFICATION AND DENITRIFICATION (SND) IN MODIFIED SEQUENCING BATCH BIOFILM REACTOR SYSTEMS (SBBR)	WASTEWATER; DENITRIFICATION	THE PROPOSED PROJECT AIMS AT STUDYING NITROGEN REMOVAL FROM SLAUGHTERHOUSE WASTEWATER BY MEANS OF SIMULTANEOUS NITRIFICATION AND DENITRIFICATION (SND) IN MODIFIED SEQUENCING BATCH BIOFILM REACTOR (SBBR) SYSTEMS. THERE WILL BE FOUR PHASES IN ONE COMPLETE SBBR OPERATIONAL CYCLE: FULL ALTERNATING AERATION AND MIXING STAGES AND DRAIN. UNDER OPTIMAL CONDITIONS INCLUDING AUTOTROPHIC DENITRIFICATION WILL TAKE PLACE IN SBBR SYSTEMS. THIS APPROACH WILL FACILITATE CHARACTERIZATION OF THE TEMPORAL AND SPATIAL DISTRIBUTION OF AS AS A FUNCTION OF GROUNDWATER AND BEDROCK GEOLOGY USING THE PRESSURES, PATHWAYS AND RECEPTORS APPROACH. ARSENIC SPECIATION STUDIES WILL DETERMINE AS TOXICITY, BIOAVAILABILITY AND POTENTIAL FOR MOBILIZATION IN THIS ENVIRONMENT THIS ADDRESSING HUMAN HEALTH ISSUES.	ZHAN	XINMIN	NATIONAL UNIVERSITY OF IRELAND GALWAY (NUIG)	DEPARTMENT OF CIVIL ENGINEERING		09-01-06	09-06-09	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	HOSPITAL EFFLUENT IMPACT ON THE MICROBIAL ENVIRONMENT AND RISK TO HUMAN HEALTH?	WASTEWATER; ANTIMICROBIAL RESISTANCE; HEALTH	ANTIMICROBIAL RESISTANCE IS A SIGNIFICANT PUBLIC HEALTH PROBLEM. THE CONTRIBUTION THE ENVIRONMENT MAKES TO EMERGENCE AND DISSEMINATION OF ANTIMICROBIAL RESISTANCE IS AN AREA OF INCREASING CONCERN. THIS PROJECT WILL DETECT AND QUANTIFY ANTIMICROBIAL RESISTANT E. COLI AND QUINOLONE RESISTANT IN HOSPITAL EFFLUENT, URBAN WASTEWATER, SEWAGE SLUDGE AND BIODEGRADABLE WASTE. THE IMPACT OF SECONDARY WASTEWATER TREATMENT AND SLUDGE TREATMENT PROCESSES IN REMOVING ANTIMICROBIAL RESISTANT E. COLI AND QUINOLONE/FLUOROQUINOLONE RESIDUES FROM WASTEWATER WILL BE ASSESSED. THIS INFORMATION WILL CONTRIBUTE TO THE DEVELOPMENT OF A RISK ASSESSMENT MODEL OF HUMAN EXPOSURE TO ANTIMICROBIAL RESISTANT E. COLI AND QUINOLONE/FLUOROQUINOLONE RESIDUES RELATED TO THE DISCHARGE OF HOSPITAL EFFLUENT. IN TERMS OF ACADEMIC OUTPUT, THIS PROJECT WILL RESULT IN THE PRODUCTION OF ONE PH.D. THESIS, AT LEAST FOUR PAPER REVIEWED PAPERS, AND SEVERAL CONFERENCE PRESENTATIONS. THIS RESEARCH WILL INCREASE CAPACITY AND STRENGTHEN LINKS BETWEEN THE INSTITUTIONS INVOLVED, AND INFORM POLICY RELATED TO THE MANAGEMENT OF HOSPITAL DISCHARGES, URBAN WASTE WATER TREATMENT, AND USE OF SEWAGE SLUDGE PRODUCTS IN AGRICULTURE. RECOMMENDATIONS TO SANITARY AND/OR	COMBICAN	MARTIN	NATIONAL UNIVERSITY OF IRELAND GALWAY (NUIG)	UNIVERSITY COLLEGE HOSPITAL		01-10-08	01-10-11	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	REFERENCE CONDITIONS AND EUTROPHICATION IMPACTS IN IRISH RIVERS: MEETING THE REQUIREMENTS OF THE PROPOSED EU WATER FRAMEWORK DIRECTIVE	RIVERS; REFERENCE CONDITIONS	THE EU WATER FRAMEWORK DIRECTIVE (WFD) REQUIRES ECOLOGICAL ASSESSMENT OF IRISH RIVERS RELATIVE TO REFERENCE CONDITIONS. BECAUSE OF HUMAN IMPACTS ON THE ENVIRONMENT, IT CAN PROVE DIFFICULT TO FIND PRISTINE RIVERS OF HIGH ECOLOGICAL QUALITY. AN IMPORTANT OBJECTIVE OF THIS PROJECT WAS TO OBTAIN AN IMPROVED UNDERSTANDING OF WHY ECOLOGICAL COMMUNITIES DEVIATE FROM REFERENCE CONDITIONS AS POLLUTION AND EUTROPHICATION IMPACT ON INDIVIDUAL SPECIES AND IN PARTICULAR INDICATOR TAXA SUCH AS ECHINORHUS. THE EFFECTS OF EUTROPHICATION ON ECHINORHUS WERE STUDIED USING A NOVEL SPLIT-STREAM EXPERIMENT WHICH INVOLVED ARTIFICIALLY INCREASING THE PHOSPHORUS (P) CONCENTRATIONS IN TWO OLIGOTROPHIC RIVERS IN THE WEST OF IRELAND. SOME OF THE NUTRIENT MANIPULATION EXPERIMENTS SHOWED SIGNIFICANT DIFFERENCES IN ALGAL BIOMASS BETWEEN THE CONTROL AND TREATED SECTIONS, BUT NOT ALL DID SO. THE EXPERIMENTS DID REVEAL SURPRISING RESULTS SHOWING THE IMPORTANCE OF NITROGEN (N) LIMITATION IN THE RIVERS STUDIED. ON ANALYSING THE N:P RATIOS IN A NUMBER OF RIVERS IN THE WEST OF IRELAND IT WAS FOUND THAT APPROXIMATELY 4% OF THE SAMPLES WERE N-LIMITED WITH LOW INORGANIC REACTIVE P (IRP) CONCENTRATIONS (0.05 MG/L P). THIS IMPLIES THAT A SMALL PROPORTION OF HIGH-STATUS RIVERS ARE N-LIMITED RATHER THAN P-LIMITED. THUS, IN TERMS OF THE WATER FRAMEWORK DIRECTIVE (WFD), THERE MAY BE A CASE FOR INTRODUCING TIGHTER REGULATIONS ON THE LIMITS OF	WALSH	AGLING	UNIVERSITY COLLEGE DUBLIN (UCD)			25-09-00	25-12-05	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	EUTROPHICATION FROM AGRICULTURAL SOURCES (PHOSPHORUS AND NITROGEN) - MODELING P-LOSSES FROM SOILS	EUTROPHICATION; PHOSPHORUS; LOSSES; SOILS	THIS PROJECT WILL FOCUS ON DEVELOPING AND VALIDATING MODELS WHICH PREDICT PHOSPHORUS (P) LOSS FROM SOIL TO WATER. THE PROJECT HAS ADOPTED TWO PARALLEL BUT COMPLEMENTARY STREAMS OF MODELLING RESEARCH. THESE ARE PROCESS-BASED PLOADING TO SURFACE WATERS WHICH ARE SPATIALLY DISTRIBUTED IN A CATCHMENT. THE EMPIRICAL APPROACH COMBINES RISK ASSESSMENT PRECEPTS AND STATISTICAL TECHNIQUES TO DERIVE A MODEL BASED ON CATCHMENT CHARACTERISTICS SUCH AS SOIL TYPE, LAND USE, TOPOGRAPHY TO PREDICT RIVER LEVELS. THE PROJECT WILL UTILISE WATER QUALITY AND STREAM FLOW DATA COLLECTED FROM OTHER EPA RIVER STUDIES (2.1.1) AND ALSO FROM THE CATCHMENT MANAGEMENT AND MONITORING STUDIES OF THE LOUGH DERG/REE AND THE THREE RIVERS PROJECT.	CARTON	OWEN	TEAGASC			01-11-00	01-10-05	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	EUTROPHICATION FROM AGRICULTURAL SOURCES (PHOSPHORUS AND NITROGEN) - SOIL	EUTROPHICATION; PHOSPHORUS; SOILS	THIS REPORT SUMMARISES THE AIMS AND METHODS RESULTS CONCLUSIONS AND RECOMMENDATIONS OF THE SURVEY EFFECTS OF AGRICULTURAL PRACTICES ON NITRATE LEACHING WHICH AIMED AT IDENTIFYING NITRATE LEACHING FROM AN INTERMEDIATELY MANAGED DAIRY FARM ON A SOIL TYPE TYPICAL OF A NITRATE VULNERABLE ZONE.	KILLY	GERARD	UNIVERSITY COLLEGE COBK (UCC)	DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING		01-11-00	30-04-05	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	HIGH ECOLOGICAL COMMUNITY TRAININGS SET AND ECOLOGICAL RESTORATION TARGETS	LAKE; RESTORATION TARGETS; BENTHOS	THIS PROJECT WILL EXAMINE AQUATIC PLANTONIC AND BENTHIC ELEMENTS IN IRISH LAKE PHOLOSSES TO DEVELOP ECOLOGICAL RESTORATION TARGETS. THIS WILL BE ACHIEVED VIA THE DEVELOPMENT OF A COMMUNITY SET (PROVIDING DETAILED AND CLASSICAL) APPLICATION OF PALAEOECOLOGICAL TECHNIQUES AND THE USE OF ANALOGUE MATCHING, BENTHOS AND CLADOCERA ARE THE MOST ABUNDANT OF FRESHWATER ORGANISMS, ARE VERY SENSITIVE TO A WIDE RANGE OF CHEMICAL AND ENVIRONMENTAL FACTORS, AND LEAVE EASILY IDENTIFIABLE SIGNATURES IN THE SEDIMENT RECORD. THE PROJECT WILL UTILISE THE HISTORICAL RECORD IN LAKE SEDIMENTS BY COMPARING IT TO CONTEMPORARY COMMUNITIES IN A RANGE OF MODERN REFERENCE LAKES. EXAMINATION OF A RANGE OF SEDIMENT TIME SCALES, PRIOR TO DETRITIFICATION IN LAKE WATER QUALITY, WILL HELP DETERMINE A RANGE OF TARGET CONDITIONS FOR PARTIAL OR COMPLETE RESTORATION IN WATER QUALITY.	DALTON	CATHERINE	UNIVERSITY OF LIMERICK (UL)			01-05-03	01-11-06	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	A TEST OF DIFFERENT ECOLOGICAL RESPONSE TO NUTRIENT LOADS OF SOFT-WATER LAKES	LAKES; CATCHMENT PRESSURES; NUTRIENTS	THE PROJECT WILL INVESTIGATE THE DIFFERENT ECOLOGICAL RESPONSES TO CATCHMENT PRESSURES AS DEFINED IN NUTRIENT LOADS IN THREE IRISH AND THEIR SOFT-WATER LAKES. THE WORK WILL INCLUDE SEASONAL FIELD MEASUREMENTS INDICATIVE OF LAKE QUALITY, ASSESSMENT OF ECOLOGICAL PRESSURES AND USE OF LABORATORY EXPERIMENTS TO IDENTIFY AND QUANTIFY MECHANISMS IMPORTANT FOR THE TRANSLATION OF NUTRIENT LOAD TO ECOLOGICAL QUALITY. THE PROJECT WILL ASSESS THE VALIDITY OF USING SCENES OF QUALITY ELEMENTS TO DESCRIBE OVERALL ECOLOGICAL STATUS AND INVESTIGATE THE POTENTIAL OF PARAMETERS OF TROPHIC RESPONSE OF BIOTA TO NUTRIENTS AND NUTRIENT DEFICIENCY AS DESCRIPTORS OF ECOLOGICAL STATUS.	BRVINE	KENNETH	UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TCD)			01-11-02	01-11-06	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	EUTROPHICATION FROM AGRICULTURAL SOURCES (PHOSPHORUS AND NITROGEN) - GRAZED	EUTROPHICATION; PHOSPHORUS; GRAZED PASTURES	THE OBJECTIVES OF THE PROJECT ARE AS FOLLOWS: 1. MEASURE THE P AND N LOSS FROM GRAZED AND CUT GRASSLAND ON A NUMBER OF SITES TAKING ACCOUNT THE MOST IMPORTANT INFLUENCING VARIABLES. 2. INVESTIGATE AT LABORATORY SCALE THE INTERACTIONS BETWEEN PHYSICAL, CHEMICAL AND BIOLOGICAL PROCESSES IN THE SOIL WHICH AFFECT P FLUXES AND LOSS TO WATER UNDER GRAZING CONDITIONS. 3. RECOMMEND POSSIBLE REMEDIAL ACTIONS NECESSARY TO REDUCE P LOSS TO WATER FROM GRAZED GRASSLAND, BASED ON THE RESULTS OBTAINED AND OTHER AVAILABLE INFORMATION. MOST OF THE WORK ON THIS PROJECT WILL BE CARRIED AT TEAGASC, JOHNSTOWN CASTLE. A TEMPORARY RESEARCH OFFICER AND A WILSON FELLOW WILL WORK AS PART OF THIS TEAM.	CARTON	OWEN	TEAGASC			01-11-00	01-11-04	ENVIRONMENTAL PROTECTION AGENCY	IRELAND

	RELATIONSHIP BETWEEN BIOLOGICAL QUALITY INDEX AND FISH STOCKS IN RIVERS	RIVERS; FISH STOCK	IN IRELAND THE WATER QUALITY OF STREAMS AND RIVERS HAS BEEN ASSESSED USING MACROINVERTEBRATES, CHEMISTRY AND MACROPHYTES SINCE THE 1960S. THE WATER FRAMEWORK DIRECTIVE (EC DIRECTIVE 2000/60/EC) (WFD) LISTS FISH AMONGST THE BIOLOGICAL ELEMENTS WHICH SHOULD BE USED FOR THE CLASSIFICATION OF ECOLOGICAL STATUS OF SURFACE WATERS (RIVERS, LAKES AND TRANSITIONAL WATERS (ESTUARIES)). THIS PROJECT WAS SUPPORTED UNDER THE EPA ESTW (2000-2008) PROGRAMME TO: (i) ASSESS THE IMPACT OF WATER QUALITY AS MONITORED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA) QUALITY RATING SYSTEM (Q VALUES) ON RIVERINE FISH STOCKS; (ii) ASSESS THE FEASIBILITY OF USING FISH ASSEMBLAGES AS INDICATORS OF ECOLOGICAL QUALITY AND (iii) DEVELOPE A PREDICTIVE MODEL WHICH INCLUDES HABITAT IN THE CONTEXT OF THE WFD. INVESTIGATION OF SPECIFIC QUESTIONS REGARDING EUTROPHICATION PRESSURES WAS ALSO REQUIRED. THE PROJECT WAS AWARDED TO AND EXECUTED BY AN ALLIANCE OF STATE AGENCIES AND ACADEMIC INSTITUTIONS NORTH AND SOUTH OF THE BORDER.	CHAMP	TREVOR	CENTRAL FISHERIES BOARD			01-11-00	01-01-06	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	THE ASSESSMENT AND POTENTIAL HUMAN IMPACT OF EXPOSURE TO ENVIRONMENTAL CONTAMINANTS ON MARINE AND FRESHWATER BIOMASS	HUMAN HEALTH; ENVIRONMENTAL CONTAMINANTS; MARINE	ENVIRONMENTAL TOXICOLOGY: THE STUDY OF ADVERSE EFFECTS OF XENOBIOTICS ON ANIMALS FOUND IN THE ENVIRONMENT. IS A VERY BROAD DISCIPLINE INCORPORATING ASPECTS OF TOXICOLOGY, PHYSIOLOGY, MOLECULAR BIOLOGY, BIO- AND ANALYTICAL CHEMISTRY. LABORATORY ANALYTICAL METHODS EXIST FOR THE DETECTION AND MEASUREMENT OF MOST CONTAMINANTS FOUND IN THE ENVIRONMENT, BUT THEY ARE TIME CONSUMING AND VERY EXPENSIVE AND OFTEN IMPRACTICAL FOR SCREENING PROGRAMS OR ROUTINE TESTING. ALSO WHEN DEALING WITH MULTIPLE CHEMICALS AS IS MOST OFTEN THE CASE (PARTICULARLY WITH MUNICIPAL EFFLUENTS), INDIVIDUAL MEASUREMENTS MAY NOT GIVE AN OVERALL VIEW OF THE TRUE TOXICITY IF THESE ACT IN SYNERGY. IN A CUMULATIVE MANNER, IT HAS THEREFORE BEEN RECOMMENDED THAT TESTS SHOULD BE USED THAT MEASURE THE OVERALL TOXICITY OF A SAMPLE RATHER THAN INDIVIDUAL CONTAMINANTS. WITH THE SUGGESTED USE OF THE BIOMARKER APPROACH, BIOMARKERS CONSIST OF BIOCHEMICAL AND/OR PHYSIOLOGICAL CHANGES IN ORGANISMS EXPOSED TO CONTAMINANTS, AND THUS REPRESENT INITIAL RESPONSES TO ENVIRONMENTAL PERTURBATIONS AND CONTAMINATION (BOY ET AL., 1996). THEY OFFER MORE COMPLETE AND BIOLOGICALLY MORE RELEVANT INFORMATION ON THE POTENTIAL IMPACT OF TOXIC	GUINN	BRIAN	GALWAY DAVID INSTITUTE OF TECHNOLOGY (DMIT)	RISH CENTRE FOR ENVIRONMENTAL TOXICOLOGY (ICET)		01-03-08	01-03-13	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	GENETIC METHODS TO IMPROVE CRVI BIODEGRADATION IN GROUNDWATER	GROUNDWATER; CONTAMINATION; HEALTH	CRVI CONTAMINATION OF GROUNDWATER AND SOILS IS A PRIMARY PUBLIC HEALTH CONCERN IN IRELAND. BIODEGRADATION IS AN ENVIRONMENTAL SCALE CRVI	MARSH	ENICO	DUBLIN CITY UNIVERSITY (DCU)			11-09-08	11-09-11	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	PULSED UV LIGHT INACTIVATION OF CRYPTOSPORIDIUM SPP. OOCYSTS IN DRINKING WATER SUPPLIES IN IRELAND	DRINKING WATER; CRYPTOSPORIDIUM	TO DEVELOP AND OPTIMIZE A HIGH INTENSITY PULSED ULTRAVIOLET (PIV) LIGHT SYSTEM FOR THE INACTIVATION OF CRYPTOSPORIDIUM SPP. OOCYSTS IN WATER SAMPLES AND TO INVESTIGATE SCALE UP OF AN OPTIMISED PIV SYSTEM FOR APPLICATIONS IN THE WATER INDUSTRY.	ROMAN	NEIL J	ATHLONE INSTITUTE OF TECHNOLOGY (AIT)			11-09-08	11-09-11	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	DEVELOPMENT OF MICROBIAL SOURCE TRACKING TECHNIQUES	HEALTH; BACTERIOIDES	THIS PROPOSAL FOCUSES ON MICROBIAL SOURCE TRACKING (MST) TOOLS FOR APPLICATION IN IRELAND. IN PARTICULAR IT CENTRES ON BACTERIOIDES AS MARKER FOR FAECAL POLLUTION, AS APPLICANTS HAVE PREVIOUSLY SHOWN THE USEFULNESS OF THESE IN IRELAND. THIS PROPOSAL AIMS TO VALIDATE ADDITIONAL MST MARKERS FOR USE IN IRELAND. THE BEHAVIOUR OF MST MARKERS IN A WELL CHARACTERISED CATCHMENT WILL BE ANALYSED, WITH EMPHASIS ON RELATION TO BACTERIOLOGICAL PARAMETERS SET OUT IN THE EU WATER DIRECTIVES. THE POTENTIAL ROLE OF RIVERINE SEDIMENTS AS RESERVOIR FOR MST MARKERS WILL BE DETERMINED. THE RELATIONSHIP OF MST MARKERS WITH THEIR HOSTS WILL BE STUDIED. THE PROJECT WILL DISSEMINATE THE RESULTS THROUGH INTERNATIONAL, PEER REVIEWED SCIENTIFIC JOURNALS AND IN RELEVANT CONFERENCES FOCUSING ON WATER QUALITY. WE PREVIOUSLY HAVE ORGANISED TWO SUCCESSFUL WORKSHOPS FOLLOWING THE IREW PROJECT FOR IRISH STAKEHOLDERS, E.G. WATER QUALITY MANAGERS. A SIMILAR WORKSHOP TO DISSEMINATE RESULTS AT THE END OF THE PROJECT WILL BE ORGANISED FOR STAKEHOLDERS. THE FINAL REPORT INCLUDING RESULTS AND STANDARD OPERATING PROCEDURES WILL BE MADE AVAILABLE ON CDROM TO STAKEHOLDERS.	MUIR	WM. G.	UNIVERSITY COLLEGE DUBLIN (UCD)	UNIVERSITY COLLEGE DUBLIN		01-11-08	01-11-11	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	TREATMENT AND MONITORING OF NUTRIENTS, ODOUR AND SLUDGE AT A SMALL TOWN DEMONSTRATION WASTEWATER TREATMENT SYSTEM.	WASTEWATER; DEMONSTRATION; ODOUR; SLUDGE	IT IS PROPOSED THAT SUCH A DEMONSTRATION WASTEWATER TREATMENT SYSTEM WILL BE BUILT FOR AN EXISTING SMALL TOWN IN IRELAND IN CONJUNCTION WITH GALWAY COUNTY COUNCIL. ORGANIC CARBON NUTRIENTS AND ODOURS WILL BE REMOVED USING A NEW LOW- WILLOW CHIPS ARE USED AS A BIOFUEL. MEMBRANE FILTRATION, SOIL SAND AND WETLAND FILTER ALTERNATIVES WILL ALSO BE INSTALLED. THE PERFORMANCE OF THE TREATMENT SYSTEM WILL BE MONITORED REGULARLY USING SAMPLERS, SENSORS, ANALYSERS AND MODERN, REMOTE CONTROLS WILL BE INSTALLED. COMPUTER MODELS AND DESIGN CRITERIA WILL BE DEVELOPED AND PUBLISHED.	RODGERS	MICHAEL	NATIONAL UNIVERSITY OF IRELAND GALWAY (NUIG)	DEPARTMENT OF CIVIL ENGINEERING		04-09-06	06-06-10	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
PATHWAYS	ASSESSING, MODELLING AND MANAGING WATER AND CONTAMINANT MOVEMENT ALONG PATHWAYS (UNDERGROUND AND OVER-GROUND) FROM THE LAND SURFACE TO AQUATIC RECEPTORS, INCLUDING THE ROLE OF CONTAMINANT TRANSPORT AND ATTENUATION.	PATHWAYS; POLLUTANTS; TRANSPORT; SOURCES; RECEPTORS	DEVELOPMENT AND IMPLEMENTATION OF RIVER BASIN DISTRICT (RBD) MANAGEMENT PLANS REQUIRES A HOLISTIC UNDERSTANDING OF THE HYDROLOGICAL CYCLE AND HOW HUMAN PRESSURES MAY IMPACT GROUNDWATER AND RELEVANT ECOLOGICAL RECEPTORS. IRISH HYDROGEOLOGICAL AND GEOLOGICAL CONDITIONS MAKE THIS PARTICULARLY CHALLENGING. THIS MULTIDISCIPLINARY STUDY PROPOSES INTEGRATING EXISTING RESEARCH WITH LATEST TECHNOLOGICAL DATA ACQUISITION EMPLOYING INVERSE TECHNIQUES, HERETOFORE RARELY EMPLOYED IN IRELAND, TO BETTER CONSIDER TRANS-SCALE INTEGRATED WATER RESOURCES MANAGEMENT.	FLYNN	RAYMOND	QUEENS UNIVERSITY BELFAST	SCHOOL OF PLANNING, ARCHITECTURE & CIVIL ENG.		01-07-08	01-07-13	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	BIOLOGICAL EFFECTS AND CHEMICAL MEASUREMENTS FOR THE ASSESSMENT OF POLLUTION IN IRISH MARINE WATERS	MARINE STRATEGY DIRECTIVE; MARINE ECOSYSTEMS; MARINE WATERS	DEVELOPMENT OF NATIONAL COMPETENCY AND CAPACITY FOR THE PROVISION OF VALIDATED MONITORING UNDER THE OCEAN CONVENTION. WATER FRAMEWORK AND PROPOSED EU MARINE STRATEGY DIRECTIVE ENHANCEMENT OF OUR CURRENT UNDERSTANDING OF THE POTENTIAL EFFECTS OF POLLUTANTS ON IRISH MARINE ECOSYSTEMS AND ASSESSMENT OF ACTUAL IMPACTS OF POLLUTANTS IN IRISH MARINE WATERS. ULTIMATELY, THIS PROJECT WILL PROVIDE THE BASIS FOR ONGOING ASSESSMENT OF MARINE ECOSYSTEM HEALTH WITH RESPECT TO POLLUTANTS AND PROVIDE A BETTER BASIS FOR GOOD POLICY MAKING.	WILSON	JAMES	UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TCD)			01-08-08	01-02-12	ENVIRONMENTAL PROTECTION AGENCY; MARINE INSTITUTE	IRELAND
	DEVELOPMENT OF AN INTELLIGENT INTERMITTENTLY AERATED SEQUENCING BATCH REACTOR (IASBR) TECHNOLOGY FOR NUTRIENTVIEW TO COMMERCIALIZATION	WASTEWATER; TECHNOLOGY; INTELLIGENT INTERMITTENTLY AERATED SEQUENCING BATCH REACTOR	THE PROPOSED PROJECT AIMS TO DEVELOP AN INTELLIGENT, INTERMITTENTLY AERATED SEQUENCING BATCH REACTOR (IASBR) TECHNOLOGY FOR NUTRIENT ADAPTING OPERATION IN RESPONSE TO VARYING INFLUENT WASTEWATER CHARACTERISTICS. THIS CAN BE ACHIEVED BY CONTROLLING IASBRs WITH SOFTWARE PROGRAMME AND PROBE DATA. RESEARCH CONTENTS WILL INCLUDE (1) DEVELOPMENT OF CONTROL SOFTWARE WITH LABORATORY STUDIES (2) INVESTIGATION OF NITROGEN TRANSFORMATION BY EXAMINING N2O EMISSIONS AND MICROBIAL CHARACTERISTICS IN IASBRs AND (3) COMMERCIAL AND TECHNICAL ASSESSMENT OF THE PROPOSED TECHNOLOGY.	ZHANG	XINMIN	NATIONAL UNIVERSITY OF IRELAND GALWAY (NUIG)	DEPARTMENT OF CIVIL ENGINEERING		01-10-09	01-10-12	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
EUTROPHICATION FROM AGRICULTURAL SOURCES	EUTROPHICATION FROM AGRICULTURE SOURCES (PHOSPHORUS AND NITROGEN) - SOIL AND PHOSPHORUS	EUTROPHICATION; PHOSPHORUS; SOIL	1. TITLE SOIL AND PHOSPHORUS AND 2) STUDY THE MECHANISMS OF INCREASING P CONCENTRATIONS IN WATER WITH INCREASING FLOW AND THE FACTORS INFLUENCING THIS PHENOMENON UNDER LOCAL ENVIRONMENTAL CONDITIONS. 3) INTEGRATE THE RESULTS OF THE P LOAD LOSS FOR THE THREE CATCHMENTS (RESULTS FROM 2.1.1A)	CARTON	OWEN	TEAGASC			01-11-00	01-11-04	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	WASTEWATER TREATMENT EFFICIENCY OF SUBSOLDS AND STRATIFIED SAND FILTERS	WASTEWATER; SUBSOLDS; STRATIFIED SAND FILTERS	IN IRELAND, WASTEWATER FROM ONE THIRD OF THE POPULATION IS TREATED IN SMALL PHASE 1 TRIGS AT TWO TEST SITES (SEPTIC TANK AND SECONDARY TREATMENT EFFLUENT) ON STRATIFIED SAND FILTER AND SURFLO. PERFORMANCE (E1) MONITORING PHASE 1 COLLATION OF RESULTS, ANALYSES AND FINAL REPORT PREPARATION.	GALL	LAURENCE	UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TCD)			01-11-00	01-05-04	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
P-6evb	FORESTRY AND ENVIRONMENT IMPACTS ADDRESSING WATER QUALITY AND BIODIVERSITY FOREST OPERATIONS AND EUTROPHICATION	FORESTRY; WATER QUALITY; PHOSPHORUS	THE OVERALL OBJECTIVE OF THIS PROJECT IS TO DETERMINE THE IMPACT OF FORESTRY AND FORESTRY PRACTICES ON PHOSPHORUS IN SURFACE WATERS. THERE ARE THREE MAJOR TASKS IN THE PROJECT. TASK 1 WILL DETERMINE THE IMPACT OF FOREST OPERATIONS ON NUTRIENT CONCENTRATIONS IN SURFACE BUILT-UP FLOW.	FARRELL	TED	UNIVERSITY COLLEGE DUBLIN (UCD)	REVIEWER		18-12-01	18-06-05	ENVIRONMENTAL PROTECTION AGENCY; COFORD	IRELAND
EUTROPHICATION FROM AGRICULTURAL SOURCES	EUTROPHICATION FROM AGRICULTURE SOURCES (PHOSPHORUS AND NITROGEN) - FARM SCALE WORK PACKAGE	EUTROPHICATION; PHOSPHORUS; NITROGEN LEACHING; FARM	THE SOURCES PATHWAYS AND IMPACTS OF EXCESS NUTRIENT LOSSES FROM AGRICULTURE INCLUDING NITRATE (NO3) LEACHING THAT CONTRIBUTE TO EUTROPHICATION OF WATER, DRINKING PROGRAMMING LANGUAGE (DELPHI 5) AND THE VALIDATION OF SOME OF THE N BATHWATER WATER RESULTS.	CARTON	OWEN	TEAGASC			01-11-00	01-12-05	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	ENDOCRINE DISRUPTING SUBSTANCES IN THE IRISH AQUATIC ENVIRONMENT	FRESHWATER; ENDOCRINE DISRUPTING SUBSTANCES	THE OBJECTIVE OF THE CURRENT PROJECT IS TO PROVIDE AN ASSESSMENT OF THE POTENTIAL RISK FROM END TO IRISH FRESHWATER. THE ECOTOXIC AND ASSOCIATED DRINKING WATER RESOURCES. THIS INTERIM REPORT PROVIDES A REPORT ON THE PROGRESS ACHIEVED DURING THE FIRST TWELVE MONTHS OF THIS TWO YEAR PROJECT. A THOROUGH LITERATURE REVIEW OF THE AREA HAS BEEN CARRIED OUT, WITH SPECIAL REFERENCE MADE TO THE IRISH AQUATIC ENVIRONMENT. THIS REVIEW IS INCLUDED IN THE INTERIM REPORT. A TOXICITY IDENTIFICATION AND EVALUATION (TIE) METHOD HAS BEEN DEVELOPED FOR THE DETERMINATION OF ESTROGENIC SUBSTANCES IN A VARIETY OF AQUICUS ENVIRONMENTAL MATRICES AND ITS PERFORMANCE DETERMINED USING A NUMBER OF ESTROGENIC SUBSTANCES MOST LIKELY TO BE PRESENT IN THE AQUATIC ENVIRONMENT. SOPS ARE ALSO INCLUDED IN THE REPORT GIVING A DETAILED DESCRIPTION OF THE ANALYTICAL TECHNIQUES USED. A PRELIMINARY TIE ASSESSMENT OF UNCLUTTERED EFFLUENT FROM BALLINGLAW WWTW HAS BEEN PERFORMED AND THE EFFLUENT HAS BEEN SHOWN TO HAVE ESTROGENIC ACTIVITY.	TARRANT	HELDISE	CORK INSTITUTE OF TECHNOLOGY (CIT)			22-02-01	22-06-04	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
EUTROPHICATION FROM AGRICULTURAL SOURCES	EUTROPHICATION FROM AGRICULTURE SOURCES (PHOSPHORUS AND NITROGEN) - FIELD BY FIELD ASSESSMENT	EUTROPHICATION; PHOSPHORUS; NITROGEN LOSSES; FIELD	THIS PROJECT WILL OFFICIALLY EXAMINE MAGGETT'S (1998) RANKING SCHEMES FOR THE RISK OF LOSING N AND P FROM THE LANDSCAPE TO WATER BODIES. THE SCHEMES WILL INCLUDE AN ASSESSMENT OF POLLUTANT LOSS RISKS ASSOCIATED WITH FARMYARDS, COST AND TIME CONSTRAINTS PROHIBIT FIELD PROJECT LEADERS OF THESE STUDIES HAVE AGREED TO TRACK DATA COLLECTION ON NUTRIENT USE AND PRODUCTION CATCHMENT CHARACTERISTICS TO MATCH THE REQUIREMENTS OF MAGGETT'S RANKING SCHEMES. THESE CATCHMENTS WILL THIS PROVIDE COMPREHENSIVE DATA SETS FOR USE IN EVALUATING THE RANKING SCHEMES, IN PARTICULAR OWING TO THEIR SIZE, THESE CATCHMENTS WILL MAKE IT FEASIBLE TO VISIT EACH FARMYARD AND CONDUCT A DETAILED ASSESSMENT AS PRESCRIBED IN THE RANK SCHEMES.	MAGGETT	WILLIAM	UNIVERSITY COLLEGE DUBLIN (UCD)			01-07-02	01-04-06	ENVIRONMENTAL PROTECTION AGENCY	IRELAND

	ASSESSMENT OF PHARMACEUTICAL RESIDUE LEVELS AND CONSEQUENT POTENTIAL HEALTH IMPACTS IN RECEIVING WATERS AT THREE IRISH SEWAGE TREATMENT PLANTS	WASTEWATER, HEALTH, PHARMACEUTICAL RESIDUES	THIS STUDY WILL ADOPT A TWO-LEVEL APPROACH TO THE ASSESSMENT OF BOTH THE PRESENT AND HEALTH IMPACTS OF PHARMACEUTICAL RESIDUES AT THREE IRISH SEWAGE TREATMENT PLANTS (STPS) AND THEIR RECEIVING WATERS. A COMBINATION OF A COMPREHENSIVE YEAR-CASE SCENARIOS OF THE EXPECTED HEALTH IMPACTS FOR A RANGE OF BIOTA.	TOBIN	JOHN		DUBLIN CITY UNIVERSITY (DCU)			01-12-04	01-07-08	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	A NOVEL BIOTECHNOLOGICAL APPROACH TO PHOSPHORUS REMOVAL FROM WASTEWATERS	WASTEWATER, REMOVAL, BIOTECHNOLOGICAL APPROACH	PHOSPHATE REMOVAL FROM WASTEWATERS IS IMPORTANT FOR THE CONTROL OF EUTROPHICATION AND IS ENFORCED BY STRICT LEGISLATION. CURRENT TECHNOLOGIES EMPLOYED TO ACHIEVE DISCHARGE CONSENTS ARE EXPENSIVE AND/OR UNRELIABLE. WE HAVE DEVELOPED THAT CERTAIN ACTIVATED-SLUDGE MICROORGANISMS (PNEUMONON) THIS OFFERS THE PROSPECT OF A NOVEL SOLUTION TO A SERIOUS ENVIRONMENTAL PROBLEM. A PREREQUISITE TO FURTHER EXPLOITATION OF OUR NOVEL P REMOVAL PROCESS IS A GREATER SCIENTIFIC UNDERSTANDING OF THE FACTS (SIMULATION/PNEUMONON)	MCGRATH	JOHNW		QUEEN'S UNIVERSITY BELFAST			01-09-06	01-04-10	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	SMART COASTS - SUSTAINABLE COMMUNITIES (SCSC)	BATHING WATERS, HEAD-LAD BEACH	THE POLICY DRIVER IS THE COMPLIANCE OF BATHING WATERS WITH NEW EU STANDARDS AND PUBLIC HEALTH PROTECTION (I.E. THE RESPONSIBILITY OF THE SWANSEA COUNCIL STAKEHOLDERS THIS, TO PROTECT HEALTH AND MAINTAIN HIGH LEVELS OF BLUE FLAG BEACHES. SIMPLE NUMERICAL COMPLIANCE WITH NEW STANDARDS IS THE EU REGULATORY REQUIREMENT ON MEMBER STATES. HOWEVER, THEY HAVE THE OPTION TO USE REAL TIME MANAGEMENT APPROACH TO BEACHES ACROSS THE EU. SPILLSHORE ZONE WILL ALSO BE DELIVERED AS THE PROJECT PROVIDES TOOLS FOR MICROBIAL SOURCE APPORTIONMENT, MODELLING AND BUDGETING.	MASTROSON	BARTHOLOMEW		UNIVERSITY COLLEGE DUBLIN (UCD)	SCHOOL OF BIOMOLECULAR AND BIOMEDICAL SCIENCE		01-07-10	30-06-13	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	MACROALGAL BIOMONITORING - APPLYING PHENOLIC COMPOUNDS AS BIOMARKERS FOR METAL UPTAKE CHARACTERISTICS IN IRISH COASTAL ENVIRONMENTS	COASTAL WATERS, METAL CONTAMINATION, PHENOLIC COMPOUNDS	ALTHOUGH BROWN SEAWEEDS ARE COMMONLY APPLIED AS BIOMONITORS FOR METAL CONTAMINATION IN COASTAL AND TRANSITIONAL WATERS, THE ENVIRONMENTAL IMPACTS (E.G. EUTROPHICATION, SALINITY ON PHENOL CONTENTS), WHICH ARE LARGELY RESPONSIBLE FOR THEIR METAL-INDUCED VARIATION IN ALGAL PHENOLS IS STILL AN RECOMMENDATIONS FOR IMPROVED COASTAL MANAGEMENT INCLUDING SEAWEED HARVESTING.	CONNAN	SOLENE		NATIONAL UNIVERSITY OF IRELAND GALWAY (NUIG)			24-12-05	24-12-08	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	INTEGRATED GIS AND NEURO FUZZY ANALYSIS FOR USE IN RIVER-BASIN DISTRICT MANAGEMENT	WATER FRAMEWORK DIRECTIVE, MANAGEMENT, GIS	IN THIS STUDY, A NEW TOOL IS PROPOSED FOR USE IN THE MANAGEMENT OF RIVER-BASIN DISTRICTS AS REQUIRED BY THE WATER FRAMEWORK DIRECTIVE. THE TOOL WILL BE PRIMARILY USED TO PREDICT THE IMPACT OF MANAGEMENT SCENARIOS ON WATER QUALITY AND QUANTITY VARIABLES. IT WILL BE BUILT ON AN ARGGIS FRAMEWORK AND IT WILL INCORPORATE THE ART NEURO-ANALYSIS MODEL. WE WILL BE ALLOWED TO ALLOW OF USING THE TOOL IN A FORECASTING MODE WHEN FUTURE DATA BECOMES AVAILABLE. FINALLY, A GIS MODEL FOR PROCESSING INPUT/OUTPUT DATA WILL BE WRITTEN TO ENABLE IDENTIFICATION OF SPATIAL AND TEMPORAL PATTERNS.	NASR	AHMED		UNIVERSITY COLLEGE DUBLIN (UCD)			01-11-05	11-12-10	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	LUMINATE - PAST, CURRENT AND FUTURE INTERACTIONS BETWEEN PRESSURES, CHEMICAL STATUS AND BIOLOGICAL QUALITY ELEMENTS FOR LAKES IN TWO CONTRASTING INSTRUMENTED CATCHMENTS IN IRELAND (LUMINATE)	LAKES, RESPONSE MODELLING	USING A COMBINATION OF EXISTING AND NEW DATA FOR INSTRUMENTED CATCHMENTS LOCATED IN TWO RIBS WITH A DYNAMIC COUPLED ECOLOGICAL PRESSURE-CONNECTED FRESH WATER LAKES AND ARE RELATIVELY RICH IN HIGH-QUALITY DATA WHICH ARE OFTEN LACKING FOR EUROPEAN CATCHMENTS. THE TWO CATCHMENTS ALSO COMPRISE EXAMPLES OF AT RISK CATEGORIES FOR LAKES, FROM 'NOT AT RISK' TO 'AT SIGNIFICANT RISK' AND ENCOMPASS A RANGE OF PRESSURES, ALL OF WHICH ARE LIKELY TO VARY IN THE YEARS UP TO AND BEYOND THE DEADLINE FOR IMPLEMENTATION OF THE WFD. EXAMINING AND MODELLING THE SIGNIFICANT ECOLOGICAL PRESSURES ON LAKES, AS NECESSARY FOR INTEGRATIONS OF INFORMATION RELATING TO OVERALL CATCHMENT CONDITIONS, OVER THE LAST C. 200 YEARS AND INTO THE FUTURE, WILL FORM THE MAIN FOCUS OF LUMINATE. LUMINATE IS SCHEDULED TO OPERATE FOR THREE YEARS AND IS BASED ON COLLABORATION BETWEEN REPRESENTATIVES OF FOUR UNIVERSITIES, THE MARINE INSTITUTE, RBO MANAGEMENT GROUPS AND A MAJOR ENVIRONMENTAL CONSULTANCY, ALL OF WHOM HAVE EXTENSIVE, RELEVANT EXPERIENCE.	TAYLOR	DAVID		UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TCD)	CENTRE FOR ENVIRONMENT (SCHOOL OF NATURAL SCIENCES)		28-02-06	28-09-09	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	QUANTITATIVE ANALYSIS OF FRACTURES SYSTEMS AND THEIR IMPACT ON FLOW PATHWAYS IN IRISH BEDROCK AQUIFERS	GROUNDWATER, FAULT AND FRACTURE SYSTEMS, PATHWAYS	THIS PROJECT WILL INVOLVE THE QUANTITATIVE ANALYSIS OF FAULT AND FRACTURE SYSTEMS IN THE BROWN OF IRISH BEDROCK TYPES, FOCUSING ON DEVELOPING GENERIC CONCEPTUAL MODELS FOR FAULT/FRACTURE SYSTEMS IN DIFFERENT LITHOLOGIES AND AT DIFFERENT DEPTHS, AND LINKING THEM TO OBSERVED GROUNDWATER BEHAVIOUR. THE PROJECT WILL DEFINE THE QUANTITATIVE CHARACTERISTICS OF THE DIFFERENT TYPES OF FAULT/FRACTURE SYSTEMS PRESENTED IN IRELAND. A VARIETY OF ATTRIBUTES/PARAMETERS, ALL OF WHICH ARE CRITICAL DETERMINANTS OF THE FLOW BEHAVIOUR AND PATHWAYS OF SUCH SYSTEMS, WILL BE DEFINED FROM HIGH QUALITY NATURAL OUTCROPS, QUARRIES AND MINES, INCLUDING FRACTURE ORIENTATIONS, DENSITIES, SPACING/CLUSTERING, SIZES (LENGTH/PERIPHERY/THICKNESS), SCALING AND CONNECTIVITY. QUANTITATIVE CHARACTERISTICS OF THE DIFFERENT FAULT/FRACTURE SYSTEMS WILL BE DEFINED IN DISTINCTIVE LITHOLOGICAL SEQUENCES (E.G. CLIP OR WALL/SORTLAND LIMESTONES), IN AN ATTEMPT TO PROVIDE A MECHANICAL BASIS FOR DIFFERENTIATING FRACTURE SYSTEM SYSTEMS AND ESTABLISHING DIFFERENCES IN THE FLOW AND TRANSPORT CONCEPTUALISATIONS ACROSS IRISH FRACTURED BEDROCKS, AND THEIR VARIATIONS EITHER IN DEPTH OR ACROSS REGIONAL ZONES. STRUCTURAL, GEOLOGIC.	WALSH	JOHN		UNIVERSITY COLLEGE DUBLIN (UCD)	SCHOOL OF GEOLOGICAL SCIENCES		01-01-12	01-01-15	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	DETECTION AND QUANTIFICATION OF VIABLE AND NON-VIABLE NOROVIRUS IN OYSTERS	SHELLFISH, NOROVIRUS, HEALTH	THE PROJECT WILL DEVELOP A METHOD FOR THE DETECTION OF NOROVIRUS IN OYSTERS. THE PROJECT WILL DEVELOP A METHOD APPLICABLE FOR ROUTINELY DETECTING VIABLE NOVS IN OYSTERS ALTHOUGH THE APPROACH DEVELOPED MAY FORM THE BASIS FOR SUCH A METHOD IN THE FUTURE. THE MAJOR OBJECTIVES OF THIS PROJECT ARE: TO DEVELOP AN EXPERIMENTAL MOLECULAR-BASED PROCEDURE TO ESTIMATE THE LEVEL OF VIABLE NOVS IN OYSTERS, TO SUBSEQUENTLY USE THIS METHOD TO DETERMINE THE RATIO OF VIABLE AND NON-VIABLE NOVS IN OYSTERS UNDER A RANGE OF CONDITIONS.	O'FLAHERTY	VINCENT		NATIONAL UNIVERSITY OF IRELAND GALWAY (NUIG)			01-02-12	01-02-15	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	TESTING HYDROMORPHOLOGICAL INTEGRITY TO SUPPORT HIGH AND GOOD STATUS OF LAKES	WATER FRAMEWORK DIRECTIVE, ECOLOGY, HYDROMORPHOLOGICAL STATUS	THIS PROPOSAL WILL COMPARE PROPOSED METRICS OF HYDROMORPHOLOGICAL STATUS (LWS, LAKE/MAAS, RAT) WITH MEASURES OF LAKE STRUCTURE AND FUNCTION USING ANALYTICAL CLASSIFICATION TOOLS AND ASSESSMENT OF CATCHMENT/WATER ZOOPLANKTON. THE WORK WILL FURTHER UNDERSTANDING OF THE LINKS BETWEEN HYDROMORPHOLOGY AND ECOLOGY, AND DEVELOP THE UNDERSTANDING OF HOW THE CONCEPTS OF HYDROMORPHOLOGY CAN BE APPLIED TO THE IMPLEMENTATION OF THE EU WATER FRAMEWORK DIRECTIVE.	JACKSON	ANDREW		UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TCD)	SCHOOL OF NATURAL SCIENCES		15-12-08	15-12-11	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	DEMONSTRATION OF A MINIATURISED MULTI-CHANNEL CYTOMETRY SYSTEM AND ITS SUITABILITY FOR AUTONOMOUS DEPLOYMENT	WATER QUALITY, ENVIRONMENTAL TECHNOLOGIES, AUTONOMOUS DEPLOYMENT	PART OF A SUITE OF THREE PROJECTS CO-FUNDED WITH MARINE INSTITUTE IN THE AREA OF ENVIRONMENTAL TECHNOLOGIES AND WATER QUALITY MONITORING. THREE PUBLISHED REPORTS STRA 2, 3, 29 & 30.	ALDERMAN	JOHN		UNIVERSITY COLLEGE COBK (UCC)			15-01-05	15-01-09	ENVIRONMENTAL PROTECTION AGENCY, MARINE INSTITUTE	IRELAND
	EFFICIENCY OF SLUGG SECONDARY SEWAGE TREATMENT SYSTEMS IN THE REMOVAL OF CRYPTOSPORIDIUM AND OTHER HUMAN ENTERIC PATHOGENS	WASTEWATER, CRYPTOSPORIDIUM, HEALTH	THIS PROJECT WILL ASSESS THE EFFICIENCY OF FOUR CO-2 SLUGG SECONDARY SEWAGE TREATMENT PLANTS IN REMOVING A RANGE OF HUMAN ENTERIC PATHOGENS NAMELY PROTOZOAN ENDOPARASITES CRYPTOSPORIDIA SPP., GIARDIA AND MICROSPORIDIUM BACTERIAL INDICATORS FACCAL COLIFORMS, ENTEROCOCCI, CLOSTRIDIUM PERFRINGENS ENTERIC VIRUS. THE PRESENCE AND VIABILITY OF THESE ENTERIC PATHOGENS WILL BE ASSESSED BY ANALYSING SAMPLES FROM EACH STAGE OF THE TREATMENT PROCESS. IN THE END-TRACING PATHOGENS, (2) RISK ASSESSMENT, (3) DEVELOPING MOLECULAR METHODOLOGIES TO ACCELERATE THE DETECTION AND ENUMERATION OF ENTERIC PATHOGENS.	LUCY	FRANCES		INSTITUTE OF TECHNOLOGY SLIGO			17-12-07	17-12-10	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	DEVELOPMENT OF A TOOL FOR ASSESSING GENERAL ANTHROPOGENIC PRESSURE ON LAKES USING LITTORAL INVERTEBRATES	LAKES, LITTORAL INVERTEBRATES	THE WATER FRAMEWORK DIRECTIVE DEMANDS THAT BENTHIC INVERTEBRATES ARE USED TO ASSESS THE ECOLOGICAL STATUS OF LAKES. LITTLE IS KNOWN, HOWEVER, ABOUT THE QUANTITATIVE EFFECTS OF ANTHROPOGENIC PRESSURES ON LAKE LITTORAL INVERTEBRATE ASSEMBLAGES. THIS PROPOSAL AIMS TO ADDRESS THIS PROBLEM BY USING EXISTING DATA, TARGETED FIELD MONITORING AND WELL-REPLICATED FIELD EXPERIMENTS TO DEVELOP TOOLS FOR ASSESSING GENERAL ANTHROPOGENIC PRESSURE BASED ON THE SPATIOTEMPORAL VARIABILITY AND COMPOSITION OF LAKE LITTORAL COMMUNITIES.	DONOHUE	IAN		UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TCD)			01-12-08	01-12-11	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	HYDROFOR - ASSESSMENT OF THE IMPACTS OF FOREST OPERATIONS ON THE ECOLOGICAL QUALITY OF WATER (HYDROFOR)	FORESTRY, CONTROL, MEASURES	THIS PROJECT WILL REVIEW THE INTERNATIONAL LITERATURE ON FORESTRY IMPACTS ON HYDROCHEMISTRY, HYDROLOGY AND ECOLOGY/SURFACE INTERACTIONS (HYDROCHEMISTRY & ECOLOGY). ANALYSIS OF FACTORS INFLUENCING FORESTRY IMPACTS ON ECOLOGY WITH A CONCEPTUAL MODEL. A DATA SET OF THE PERFORMANCE OF BUFFER STRIPS IN THE RESEARCH CATCHMENT, A PREDICTION OF THE FUTURE IMPACTS, NATIONALLY, OF FORESTRY ON ECOLOGY.	KELLY QUINN	MARY		UNIVERSITY COLLEGE DUBLIN (UCD)	SCHOOL OF BIOLOGY AND ENVIRONMENTAL SCIENCE		01-05-08	01-05-13	ENVIRONMENTAL PROTECTION AGENCY, DEPARTMENT OF AGRICULTURE, FOOD AND THE MARINE	IRELAND
	CRYPTOSPORIDIOSIS: HUMAN, ANIMAL AND ENVIRONMENTAL INTERFACE	DRINKING WATER, HEALTH, FARMING	CRYPTOSPORIDIUM IS ONE OF THE MOST IMPORTANT ZOONOTIC PARASITES IN THE DEVELOPED WORLD INCLUDING IRELAND. ALTHOUGH PREVALENT THROUGHOUT THE YEAR, OVER 90% OF HUMAN CRYPTOSPORIDIOSIS CASES OCCUR DURING THE SPRING PEAK BETWEEN MARCH AND JUNE. THIS PROJECT AIMS TO DETERMINE THE CAUSES OF THE SPRING PEAK. LIVESTOCK, WILDLIFE AND THE ENVIRONMENT IN 2 RESERVE CATCHMENT AREAS WILL BE SCREENED FOR THE PRESENCE OF CRYPTOSPORIDIUM OOCYSTS. MOLECULAR ANALYSIS WILL BE CARRIED OUT TO DETERMINE THE IMPORTANCE OF THE CRYPTOSPORIDIUM GENOTYPES OF ANIMAL ORIGIN TO HUMAN HEALTH. AS AN IMMEDIATE OUTCOME OF THIS PROJECT WE WILL BE ABLE TO MAKE RECOMMENDATIONS FOR LAND USE IN CATCHMENT AREAS OF DRINKING WATER RESERVOIRS, PARTICULARLY IN RELATION TO THE TYPE OF FARMING PRACTICES, STOCKING DENSITIES, AND HUSBANDRY PRACTICES. MOREOVER, A MOLECULAR DATABASE OF THE CRYPTOSPORIDIUM SP AND SUBTYPES THAT OCCUR IN HUMANS, LIVESTOCK, WILDLIFE AND THE ENVIRONMENT WILL BE COLLECTED. THIS CATALOGUE WILL FACILITATE THE TRACKING OF FUTURE OUTBREAKS. RESEARCH FINDINGS WILL BE DISSEMINATED ONLY AT NATIONAL AND INTERNATIONAL RESEARCH MEETINGS AND VIA A PROJECT WEBSITE. IT IS ANTICIPATED THAT A TO 5 PIER-REVIEWED PUBLICATIONS IN	DE WAAL	THEO		UNIVERSITY COLLEGE DUBLIN (UCD)	UNIVERSITY COLLEGE DUBLIN		01-10-08	01-10-11	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	SECWA - EARLY WARNING SYSTEM FOR WATER TREATMENT PLANTS AS BASIS FOR DEFENDING AND SUPPORTING THE CONCEPT OF EARLY WARNING ANALYSIS (SECWA)	WATER TREATMENT PLANTS, EARLY WARNING SYSTEMS	THE ULTIMATE OBJECTIVE OF THIS PROJECT IS TO DEVELOP AN INTELLIGENT EWS FOR WTP THAT WILL BE ACCESSIBLE ON LINE THROUGH THE INTERNET WEBSITE. THE MAIN OBJECTIVES OF THE EARLY WARNING SYSTEM ARE EXPECTED TO BE THE WTP MANAGERS AND PERSONNEL. THE OBJECTIVE OF THE EARLY WARNING IS TO WTP PERSONNEL IS TO MINIMIZE THE OCCURRENCE OF OPERATIONAL PROBLEMS IN WTP IN IRELAND BY PREDICTING THEIR OCCURRENCE AND BY TRANSMITTING APPROPRIATE MITIGATING AND RESPONSE ACTIONS. IN CASE OF EMERGENCIES THE USER CAN EITHER BE WARNED TO INCLUDE THE GROUP OF PEOPLE THAT HAVE BEEN AFFECTED DURING THE OCCURRENCE OF A SEVERE INCIDENT/ACCIDENT THROUGH THE ACTIVATION OF ALERT SERVICES WHICH WILL BE EMBEDDED WITHIN THE EWS AND WILL SUPPORT EMAIL, PHONE AND TEXT ALERTS. IN PARALLEL, WE WILL INVESTIGATE THE POTENTIAL OF USING THE EWS PLATFORM FOR SUPPORTING THE RELIABLE AND EFFECTIVE REPORTING OF WTP TO THE EPA. A CONCEPTUAL USE CASE VIEW OF THE INTELLIGENT EWS IS SHOWN IN FIGURE 3.	DOKAS	IOANNIS M.		UNIVERSITY COLLEGE COBK (UCC)			07-01-08	07-01-13	ENVIRONMENTAL PROTECTION AGENCY	IRELAND



	THE PROTECTION OF WATER RESOURCES: NEW MATERIALS FOR THE SENSING OF NITRATES AND HEAVY METALS AND FOR THE REMOVAL OF ORGANIC CONTAMINANTS	PROTECTION WATER RESOURCES; HEAVY METALS, ORGANIC CONTAMINANTS REMOVAL	THE THREE PROJECTS ARE CONCERNED WITH THE FORMATION OF NEW MATERIALS THAT CAN BE USED IN ENVIRONMENTAL SENSING APPLICATIONS AND WITH THE POTENTIAL TO REMOVE THE POLLUTANT, I.E. ENVIRONMENTAL REMEDIATION. THESE NOVEL MATERIALS CONSIST OF MODIFIED CONDUCTING POLYMER FILMS. CONDUCTING POLYMERS HAVE ATTRACTED MUCH INTEREST BECAUSE OF THEIR ELECTRONIC, ELECTROCHEMICAL, AND OPTICAL PROPERTIES. THESE POLYMERS WILL BE USED IN ALL THREE PROJECTS AND WILL SERVE AS A PLATFORM TECHNOLOGY. THE POLYMERS WILL BE MODIFIED WITH EITHER METALLIC NANOPARTICLES, CARBON NANOTUBES OR MACROCYCLIC CAGES SO THAT THE MATERIALS ARE CAPABLE OF SENSING AND/OR REMEDIATION OF NITRATES, HEAVY METALS AND ORGANIC CONTAMINANTS. THESE MODIFICATIONS ARE CAREFULLY SELECTED TO ENSURE THAT THE FINAL MATERIALS WILL HAVE THE REQUIRED SENSING OR REMEDIATION CAPACITY. INITIALLY, POLYPYRROLIDE FILMS WILL BE USED. AS POLYPYRROLIDE IS ONE OF THE MOST IMPORTANT CONDUCTING POLYMERS BECAUSE OF ITS FACILE PREPARATION AND GOOD STABILITY, OTHER CONDUCTING POLYMERS SUCH AS POLYTHIOPHENE AND PEDIOT WILL ALSO BE EMPLOYED AT A LATER STAGE TO INVESTIGATE THE ROLE THAT THE POLYMER MATRIX HAS ON EACH SYSTEM	ALCOCK EARLEY	BERNADETTE	NATIONAL UNIVERSITY OF IRELAND, MAYNOOTH (NUIUM)	DEPARTMENT OF CHEMISTRY	01-04-08	01-04-13	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	LITTORAL AND BENTHIC MACROINVERTEBRATE ASSEMBLAGES OF LOUGH MASK	LAKES, CHARACTERISATION	CHARACTERISATION OF THE LITTORAL AND BENTHIC INVERTEBRATE ASSEMBLAGES OF LOUGH MASK. AN ULTRA-TERM MONITORING OF LOUGH MASK AND OTHER ENVIRONMENTALLY SENSITIVE LAKES, AND FOR PROTECTION OF THEIR FAUNAL ASSEMBLAGES THROUGH MAINTENANCE OF HIGH WATER QUALITY LEVELS	MCCARTHY	THOMAS KIERAN	NATIONAL UNIVERSITY OF IRELAND GALWAY (NUG)		02-09-02	02-09-07	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	LONG-TERM ENVIRONMENTAL CHANGE IN LOWER LOUGH CORIBB AND ITS CATCHMENT: A MULTIDISCIPLINARY PALAEOECOLOGICAL STUDY	LAKES, LAKE LEVELS, CLIMATE CHANGE, HUMAN ACTIVITY	THE PROJECT REPRESENTS THE FIRST SERIOUS ATTEMPT TO DOCUMENT LONG-GLACIAL BOREAL CLIMATIC CHANGES, INCLUDING LAKE LEVELS AND TROPHIC STATUS, WILL BE DOCUMENTED, AND THE EFFECTS OF CLIMATE CHANGE AND HUMAN ACTIVITY ON THE LIMNIC AND TERRESTRIAL ENVIRONMENTS WILL BE CRITICALLY STUDIED.	O'CONNELL	MICHAEL	NATIONAL UNIVERSITY OF IRELAND GALWAY (NUG)		01-11-02	01-11-05	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	BIOFORST FORESTRY AND ENVIRONMENT IMPACTS ADDRESSING WATER QUALITY AND BIODIVERSITY INVESTIGATION OF EXPERIMENTAL METHODS TO ENHANCE BIODIVERSITY IN PLANTATION FORESTS	FORESTRY, BIODIVERSITY	THE OBJECTIVE OF THIS PROJECT IS TO IDENTIFY THOSE FORESTRY MANAGEMENT PRACTICES WHICH ARE SUITED TO MAINTAINING AND ENHANCING BIODIVERSITY IN PLANTATION FORESTS. THIS WILL BE ACCOMPLISHED THROUGH MEASURING PLANT AND ANIMAL DIVERSITY IN FORESTS UNDER DIFFERENT MANAGEMENT REGIMES AND COMPARING THEIR BIODIVERSITY AND THROUGH EXPERIMENTAL MANIPULATIONS OF THE FOREST AND ASSOCIATED HABITATS. IN PARTICULAR, THE FOLLOWING WILL BE INVESTIGATED: 1. THE EFFECTS OF INCLUDING BROADLEAVES INTO CONIFEROUS PLANTATIONS, AT BOTH AFForestation AND REGENERATION. 2. THE EFFECTS OF DIFFERENT THINNING AND HARVESTING TECHNIQUES ON FOREST BIODIVERSITY. 3. THE INFLUENCE OF LANDSCAPE DIVERSITY AND PATTERN ON BIODIVERSITY OF FORESTS IN THE LANDSCAPE, AND 4. ACTIVE PROCESSES SUCH AS THE PROVISION OF WOODY DEBRIS, NEST BOXES, BAT BOXES, AND SOIL LITTER FROM OTHER ECOSYSTEMS.	HEMINGER	SUSAN	UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TCD)		01-10-02	01-07-06	ENVIRONMENTAL PROTECTION AGENCY, COFORD	IRELAND
	BIOFORST FORESTRY AND ENVIRONMENT IMPACTS ADDRESSING WATER QUALITY AND BIODIVERSITY ASSESSMENT OF BIODIVERSITY AT DIFFERENT STAGES OF THE FOREST CYCLE	FORESTRY, BIODIVERSITY	THIS PROJECT IS ADDRESSING THE CURRENT GAPS IN KNOWLEDGE AS TO HOW FOREST BIODIVERSITY CHANGES DURING THE FOREST GROWTH CYCLE. MOST PLANTATION FORESTS IN IRELAND ARE MANAGED UNDER A CLEAR FELLING REGIME, WHICH MEANS THAT THEY HAVE VERY DISTINCT STAGES OF DEVELOPMENT FROM THE PLANTING STAGES UP THROUGH THicket AND POLE STAGES TO FINALLY HARVESTING AND REAR MIX. FOUR GROWTH STAGES HAVE BEEN SURVEYED, RANGING FROM JUVEENILE MATURE, TAXONOMIC GROUPS UNDER INVESTIGATION ARE: BIRDS, HONEYEATERS, SPIDERS, AND HIGHER AND LOWER PLANTS. MUCH OF THE FIELDWORK WAS CARRIED OUT DURING THE 2001 FIELD SEASON, AND THE REMAINING WORK WILL BE CARRIED OUT IN 2002. AN OFFICIAL REPORT HAS PRODUCED THE BEST PRACTICE OVERSEAS OF BIODIVERSITY ASSESSMENT IN PREPARATION FOR FORESTRY. A DATABASE FOR THE PROJECT HAS BEEN DESIGNED AND CONSTRUCTED IN THE CENTRAL RESEARCH CENTRE IN UCC. IT IS BASED ON ARCVIEW 3.2, AND HAS BEEN POPULATED WITH DATA COLLECTED DURING THE 2001 FIELD SEASON. THE DATA COLLECTED IN THE FIELD WILL CONTRIBUTE TO IDENTIFYING THE ACTUAL RANGE AND DIVERSITY OF SPECIES PRESENT IN SELECTED IRISH FOREST TYPES. THE CHANGES IN BIODIVERSITY AND SPECIES COMPOSITION OVER THE FOREST CYCLE IN THE RANGE OF FOREST TYPES EXAMINED WILL BE USED TO INFORM	HEMINGER	SUSAN	UNIVERSITY OF DUBLIN, TRINITY COLLEGE (TCD)		01-11-00	01-01-06	ENVIRONMENTAL PROTECTION AGENCY, COFORD	IRELAND
	IMPACTS OF NUTRIENTS ON THE ZEBRA MUSSEL POPULATION IN LOUGH KEY	LAKES, ZEBRA MUSSELS	THE MAIN OBJECTIVE OF THIS THREE YEAR PROJECT WAS TO DEVELOP A CLEAR UNDERSTANDING OF THE ROLE OF THE ZEBRA MUSSEL IN LAKE ECOSYSTEMS AND IN PARTICULAR THE RELATIONSHIP BETWEEN PHOSPHORUS CONCENTRATIONS ZEBRA MUSSEL POPULATIONS AND THE TROPHIC STATUS OF LOUGH KEY. THE OBJECTIVE ALSO AIMS TO 1) CONTRIBUTE TO A BETTER ENVIRONMENT BY DELIVERING APPLICABLE AND RELEVANT RFD DATA AND INFORMATION BASED ON HIGH QUALITY SCIENCE AND TECHNOLOGY 2) GENERATE DATA INFORMATION AND KNOWLEDGE FOR IMPROVED MANAGEMENT OF THE ENVIRONMENT 3) DEVELOP NEW TECHNIQUE METHODS AND SYSTEMS FOR MEASURING RECORDING AND PREDICTING THE QUALITY OF THE ENVIRONMENT. THIS IS IN LINE WITH THE DEVELOPMENT AIMS OF THE WATER FRAMEWORK DIRECTIVE (2000/60/EC) WHICH HAS BEEN TRANSPOSED INTO NATIONAL LAWS (NO. 722 OF 2003).	LUCY	FRANCES	INSTITUTE OF TECHNOLOGY SLIGO		01-11-00	01-05-04	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	SENSING AND REMEDIATION OF NITRATES USING COPPER AND BIMETALLIC COPPER NANOPARTICLES	DRINKING WATER, HEALTH	NITRATES AND OTHER NITROGEN INCREASING INTEREST IN DEVELOPING RELIABLE FAST AND SIMPLE SENSORS TO DETECT LOW CONCENTRATIONS OF NITRATE AND IN DEVELOPING NEW ENVIRONMENTAL TECHNOLOGIES TO EFFECTIVELY REMOVE NITRATES AND CONVERT THEM INTO HARMLESS PRODUCTS. IN THIS PROJECT NOVEL COPPER AND BIMETALLIC COPPER NANOPARTICLES WILL BE SYNTHESISED AND USED IN THE SENSING AND REMEDIATION OF NITRATES WITH THE AIM OF CONVERTING THE NITRATES INTO NITROGEN WHICH IS AN ENVIRONMENTALLY DESIRABLE END PRODUCT MAKING UP 78% OF THE AIR.	ABELLIN	CARMEL	NATIONAL UNIVERSITY OF IRELAND, MAYNOOTH (NUIUM)		02-10-06	13-12-12	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	WINCOMS WATER FRAMEWORK DIRECTIVE: INTERACTION, NEGOTIATION AND COMMUNICATION OF OPTIMAL MEASURES WITH STAKEHOLDERS (WINCOMS)	WATER FRAMEWORK DIRECTIVE, DECISION SUPPORT SYSTEMS	THIS PROJECT WILL PROVIDE A DETAILED ASSESSMENT OF AVAILABLE MEASURES, RECOMMENDATIONS FOR AND PRACTICAL DEMONSTRATIONS OF DECISION SUPPORT SYSTEMS WHICH INTEGRATE KNOWLEDGE OF THE PERFORMANCE OF THE BEST AVAILABLE MEASURES WITH THE CRITERIA AND PREFERENCES OF ALL RELEVANT STAKEHOLDERS AND WHICH CAN BE USED FOR DECISION ANALYSIS, NEGOTIATION AND MEDIATION IN DEVELOPING WIPOLICY AND MEASURES. THE PRINCIPLE OBJECTIVES ARE AS FOLLOWS: 1. PRODUCE A COMPREHENSIVE SCIENTIFIC AND TECHNICAL DESCRIPTION OF ALL MEASURES AVAILABLE TO MEET THE REQUIREMENTS OF THE WFD TOGETHER WITH A RANKING. 2. SURVEY EXISTING DECISION SUPPORT SYSTEMS AND IDENTIFY A SHORT-TERM STUDY SITUATION USING THE ERD PROJECT. 3. EVALUATE THEIR PERFORMANCE. 4. IDENTIFY AND STUDY THE KNOWLEDGE, OPINIONS AND PREFERENCES OF ALL RELEVANT STAKEHOLDERS AND INTEGRATE THE RESULTS WITH THE DECISION SUPPORT SYSTEMS IMPLEMENTED IN THE PROJECT.	BRILEN	MICHAEL	UNIVERSITY COLLEGE DUBLIN (UCD)	CENTRE FOR WATER RESOURCES RESEARCH	01-09-06	09-11-09	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	MARINE MONITORING SYSTEM BASED ON THE OPTICAL OXYGEN SENSING AND RESPIROMETRY	WATER QUALITY, ENVIRONMENTAL TECHNOLOGIES, AUTONOMOUS DEPLOYMENT	PART OF SUITE OF THREE PROJECTS CO-FUNDED WITH MARINE INSTITUTE IN THE AREA OF ENVIRONMENTAL TECHNOLOGIES AND WATER QUALITY MONITORING. THREE PUBLISHED REPORTS STRA 21, 28 & 36.	PAPOVSKY	DMITRIY	UNIVERSITY COLLEGE COBK (UCC)		15-01-05	15-01-09	ENVIRONMENTAL PROTECTION AGENCY, MARINE INSTITUTE	IRELAND
	THE USE OF MESOPHILIC SOLIDS TO ABSORB AND SEPARATE METALS AND NANOPARTICLES FROM AQUEOUS OR ORGANIC SOLUTIONS	WATER TREATMENT, BORNIE METAL CONTAMINANTS, NANOPARTICLES	THIS PROJECT DETAILS RESEARCH AND RESOURCES NECESSARY TO EVALUATE NEW MESOPHILIC MATERIALS FOR EFFECTIVE MEDIATION OF METAL AND NANOPARTICLE POLLUTION. THE WORK BUILDS ON METHODS AND TECHNIQUES DEVELOPED IN OUR WORLD RESPECTED GROUP. MESOPHILIC SOLIDS HAVE REGULAR STRUCTURES OF PORES AND PROVIDE MUCH HIGHER SURFACE AREAS WITH HIGHER ACCESSIBILITY THAN OTHER POSSIBLE ABSORBENTS. FURTHERMORE THEY CAN BE CHEMICALLY TAILORED TO SELECTIVELY ABSORB CHOSEN MATERIALS. OF PARTICULAR INTEREST HERE IS EXAMINING THE PROBLEM OF WATER-BORNE METAL CONTAMINANTS. WE HAVE ALSO EXTENDED THE WORK TO EXAMINE THEIR EFFECTIVENESS IN ABSORBING OR FILTERING NANOPARTICLES. NANOPARTICULATE TECHNOLOGY IS ADVANCING RAPIDLY BUT AS OF YET THEIR IMPACT ON HEALTH IS LARGELY UNASSESSED. HOWEVER IT IS EXPECTED THEY WILL HAVE DETRIMENTAL EFFECTS ON INHALATION AND SWALLOWING. THIS A POTENTIAL MEANS OF REMOVING THESE IS AN IMPORTANT CONCERN. THEIR SMALL SIZE MAKES THIS IMPOSSIBLE WITH MANY FILTRATION PRODUCTS AVAILABLE TODAY AND THEREFORE TAILORED MATERIALS FOR THIS PURPOSE ARE LIKELY TO BE IN STRONG DEMAND AS THIS SECTOR IF INDUSTRY GROWS.	HOLMES	JUSTIN	UNIVERSITY COLLEGE COBK (UCC)		01-12-05	01-06-09	ENVIRONMENTAL PROTECTION AGENCY	IRELAND
	SEABED AND GROUNDWATER DATA TO DEVELOP NEW SERVICES AND TO MODEL CLIMATE CHANGE	HAZT; COASTAL, SUBMARINE GROUNDWATER DISCHARGE, METALS, GEOPHYSICS	THIS RESEARCH EXPANDS OUR KNOWLEDGE OF GALWAY BAYS SEABED. IN ADDITION, INFORMATION HAS BEEN COLLECTED FOR ON-SHORE GROUNDWATER IN WHAT IS A WELL KNOWN KANTIC ENVIRONMENT. THE AIM WILL BE TO DEVELOP A MORE COMPREHENSIVE UNDERSTANDING OF GROUNDWATER, ITS VULNERABILITY AND ITS INTERACTION WITH SEAWATER IN THE COASTAL AREA. THE DATA COLLECTED AND INTERPRETED WILL PROVIDE INFORMATION ON PAST CLIMATE CHANGE WHICH CAN INFORM OUR UNDERSTANDING OF CLIMATE CHANGES TAKING PLACE TODAY. METALS, INCLUDING ARSENIC, ARE KNOWN IN IRISH GROUNDWATERS AND COASTAL MARINE ENVIRONMENTS, AND THE GEOLOGIC SOURCES OF THESE ARE INVESTIGATED.	BROWN	PROF COLIN	NATIONAL UNIVERSITY OF IRELAND, GALWAY	BIOSCIENCE RESEARCH GROUP	03-06-05	06-07-05	GEOLOGICAL SURVEY OF IRELAND	IRELAND