PROJECT REFERENCE	PROJECT ACRONYM	PROJECT TITLE	KEYWORDS	ABSTRACT	PI SURNAME	PI NAME	PI 2 NAME & SURNAME	RESEARCH INSTITUTION	DEPARTMENT	CENTRE	START DATE	END DATE	FUNDING AGENCY	COUNTRY
211055		SUSTAINABLE TREATMENT OF WASTEWATER BY SALSNES FILTER FINE MESH SIEVES AND BIOLOGICAL PROCESSES		SALSNES FILTER FINE MESH SIEVES HAVE BEEN VERY SUCCESSFUL FOR PRIMARY TREATMENT OF MUNICIPAL WASTEWATER. HOWEVER, THE MARKET FOR PRIMARY TREATMENT IS VERY SMALL AND DECREASING. TO OPEN UP A SIGNIFICANTLY LARGER MARKET IT IS NECESSARY TO QUALIFY THE SALSNES FILTER FINE MESH SIEVES FOR USE IN COMBINATION WITH BIOLOGICAL PROCESSES. THE PRIMARY OBJECTIVE IS TO DEVELOP FINE MESH SIEVE SYSTEMS FOR PRIMARY AND SECONDARY SOLIDS SEPARATION AT WASTEWATER TREATMENT PLANTS, WITH THE INTENT TO SAVE RESOURCES BY REDUCING THE COST AND ENERGY CONSUMPTION FOR BIOLOGICAL WASTEWATER TREATMENT AND MAXIMIZING THE ENERGY RECOVERY FROM THE ORGANIC MATTER IN THE REMOVED SOLIDS. SECONDARY OBJECTIVES:A) DOCUMENT THE OPTIMUM PARTICLE REMOVAL IN FRONT OF BIOLOGICAL PROCESSES, FOR OPTIMUM BIOLOGICAL TREATMENT PERFORMANCE AND RECOVERY OF RESOURCES FROM PARTICLES IN THE WASTEWATER.B) DEVELOP A FINE MESH SIEVE SYSTEM FOR ACHIEVING THE OPTIMUM PARTICLE REMOVAL UNDER SECONDARY OBJECTIVE A) AT THE LOWEST POSSIBLE USE OF RESOURCES.C) DEVELOP A FINE MESH SIEVE SYSTEM FOR SOLIDS SEPARATION DOWNSTREAM OF BIOFILM PROCESSES, PROVIDING GOOD, ECONOMIC AND ENERGY EFFICIENT SOLIDS REMOVAL IN A	RUSTEN	BJØRN SENIORFORSKER		SALSNES FILTER AS			30-09-11	30-09-15	RCN	NORWAY
219272		ON-LINE NEAR REAL TIME TOOLS FOR MONITORING WATER QUALITY		THE OBJECTIVE OF THIS PROJECT IS TO IMPROVE WATER QUALITY MONITORING TOOLS IN ORDER TO PROTECT PUBLIC HEALTH AND THE ENVIRONMENT. COLIFAST AS IS A WORLD-LEADER IN DEVELOPMENT AND DELIVERY OF RAPID, AUTOMATED INSTRUMENTS FOR DETECTION OF FAECAL CONTAMINATION IN WATER AND HAS BEEN IN THE MARKET FOR MORE THAN 20 YEARS. THE RAPID METHODS COMBINED WITH EARLY WARNING OPTIONS PROVIDE INFORMATION LONG BEFORE THE TRADITIONAL LABORATORY RESULTS ARE AVAILABLE. IN ADDITION, THE AUTOMATED ANALYSIS AT SITE WILL REDUCE TIME AND RISK OF ERRORS DURING SAMPLING, TRANSPORTATION AND SAMPLE PREPARATION. THE TWO MARKET AREAS THAT WILL BE TARGETED IN THE PROJECT ARE DRINKING WATER AND BALLAST WATER. FOR THE BALLAST WATER MARKET, FORTHCOMING REGULATIONS WILL REQUIRE SHIPBOARD RAPID METHODS TO DETERMINE THE SAFETY OF WATER TO BE RELEASED. BOTH MARKETS ARE DRIVEN BY REGULATIONS DEMANDING MORE RAPID, AND IDEALLY REAL TIME ON-LINE TEST CAPABILITIES FOR MICROORGANISMS. THE PARTICIPANTS IN THE PROJECT ARE WELL KNOWN AND RECOGNIZED PARTICIPANT IN THE DRINKING WATER MARKET. IN ADDITION TO COLIFAST, THE RESEARCH INSTITUTION NIVA AND THE NORWEGIAN SME VENDOR, PEMAC AS, ARE CONTRIBUTING. THE PROJECT IS ALSO	TRYLAND	INGUN		COLIFAST AS			01-07-12	30-06-15	RCN	NORWAY
208056		SUSTAINABLE SALMON ANGLING TOURISM IN A CHANGING WORLD		THIS PROPOSAL AIMS AT PROVIDING IMPORTANT, NEW KNOWLEDGE ABOUT HOW MARKET SEGMENTS AND ANGLING PRODUCTS ARE AFFECTED AND RESPOND TO RECENT CHANGES IN NORWEGIAN SALMON ANGLING TOURISM. MORE SPECIFICALLY WE WILL ESPECIALLY LOOK INTO HOW CHANGES AFFECT LOCAL ECONOMIES, TYPE AND MAGNITUDE OF SUBSTITUTION PROCESSES AMONG ANGLERS DUE TO RESOURCE AND REGULATORY CHANGES AND THEIR EFFECTS ON RECREATION VALUES, AND ON HOW THE MANY, HIGHLY CONTRASTING DISCOURSES ON NORWEGIAN SALMON AFFECTS BRANDING, IMAGE AND IDENTITY OF NORWEGIAN SALMON ANGLING IN DIFFERENT MARKETS. ICELAND IS A HIGHLY INTERESTING CONTRAST TO NORWAY, WITH RECENTLY VERY GOOD SALMON RETURNS, YET SALMON FISHING TOURISM HAS BEEN STRONGLY AFFECTED BY THE FINANCIAL CRISIS. A MULTIDISCIPLINARY FRAMEWORK FOR ASSESSING AND ANALYZING THE FINDINGS IS RESILIENCE THEORY, WE AIM AT PROVIDING IMPORTANT CONTRIBUTION TO MARKET COMMUNICATION, INNOVATION AND PRODUCT DEVELOPMENT IN THE COMING YEARS WITH THE GOAL OF BUILING A MORE SUSTAINABLE SALMON TOURISM IN NORWAY. THE PROJECT PROPOSAL IS DEVELOPED IN CLOSE COOPERATION WITH KEY BUSINESS ORGANIZATIONS AND MANAGEMENT AUTHORITIES, AND WILL	STENSLAND	STIAN STIPENDIAT		UNIVERSITETET FOR MILJØ- OG BIOVITENSKAP	INSTITUTT FOR NATURFORVALTNING		01-10-11	31-12-15	RCN	NORWAY
216416		SURVIVAL, BEHAVIOUR AND WELFARE OF ATLANTIC SALMON AFTER CATCH AND RELEASE		MANY POPULATIONS OF WILD SALMONIDS HAVE DECREASED SIGNIFICANTLY DURING THE LAST DECADES DUE TO ANTHROPOGENIC IMPACTS ACTING BOTH IN FRESHWATER AND IN THE SEA. AS THE MENACES THESE FISH SPECIES EXPERIENCE WILL LIKELY CONTINUE TO INCREASE, SALMONID POPULATIONS ARE EXPECTED TO FURTHER DECLINE IN THE FUTURE, UNLESS EFFECTIVE MITIGATIVE ACTIONS ARE IMPOSED. CATCH AND RELEASE (C&R) OF ADULT FISH IS A FREQUENTLY USED, BUT ALSO CONTROVERSIAL, MANAGEMENT TOOL AIMED AT MAINTAINING SUSTAINABLE SPAWNING STOCKS. C&R IS PRACTICED WORLDWIDE AND IT IS IN MOST COUNTRIES REGARDED AS AN ADEQUATE MANAGEMENT TOOL. IN NORWAY, C&R HAS SO FAR NOT BEEN WIDELY USED OR ACCEPTED, MAINLY DUE TO ETHICAL AND WELFARE CONCERNS. ALTHOUGH SOME STUDIES HAVE BEEN PERFORMED ON EFFECTS OF C&R IN ATLANTIC SALMON, A RANGE OF QUESTIONS REMAINS UNANSWERED. THE PROPOSED PROJECT AIMS TO OBTAIN NEW KNOWLEDGE REGARDING THE EFFECTS OF CATCH AND RELEASE OF SALMON IN RECREATIONAL FISHERIES THAT 1) WILL IMPROVE THE WAY THIS MANAGEMENT TOOL IS USED, AND 2) IMPLICITLY WILL CONTRIBUTE TO MAINTENANCE OF SUSTAINABLE SPAWNING STOCKS. MORE SPECIFICALLY THE PROPOSED STUDY WILL INVESTIGATE EFFECTS OF C&R AT HIGH WATER TEMPERATURES AND PERFORMANCE AFTER C&R IN RELATION TO ANGLING METHOD, PLAYING TIME	THORSTAD	EVA FORSKNINGSDIREKTØR		STIFTELSEN NORSK INSTITUTT FOR NATURFORSKNING NINA			01-01-12	31-12-14	RCN	NORWAY

206084		THE ROLE OF WATER IN HISTORY AND DEVELOPMENT		THE CONFERENCE 'THE AGE OF UNCERTAINTY: CLIMATE CHANGE, WATER SYSTEMS AND SOCIAL DEVELOPMENT', FEBRUARY 16-18, 2011, BERGEN, WILL BRING TOGETHER LEADING RESEARCHERS FROM DIFFERENT DISCIPLINES AND COUNTRIES TO SUMMARISE WHAT WE KNOW AND WHAT WE DO NOT KNOW REGARDING THE RELATIONSHIP BETWEEN CLIMATE, SOCIAL DEVELOPMENT, AND ENVIRONMENT, WITH A SPECIAL FOCUS ON THE MODERN AGE. THE CONFERENCE WILL ALSO PRESENT RESEARCH FINDINGS, ANALYTICAL APPROACHES AND CONCEPTUAL TOOLS THAT ARE OF GENERAL INTEREST AND THAT HAVE BEEN DEVELOPED BY A RESEARCH GROUP AT CENTRE FOR ADVANCED STUDY DEALING WITH 'UNDERSTANDING THE ROLE OF WATER IN HISTORY AND DEVELOPMENT'. THE THREE DAY PROGRAMME WILL INCLUDE: - DAY I: CLIMATE, DEVELOPMENT AND GEOPOLITICS. - DAY II: CLIMATE CHANGE, HEALTH AND SOCIAL DEVELOPMENT. - DAY III: CLIMATE, WATER AND THEORETICAL AND METHODOLOGICAL ISSUES: A PHD SEMINAR. THE SIX VOLUME BOOK SERIES A HISTORY OF WATER WILL BE LAUNCHED AT THE CONFERENCE. THREE NEW VOLUMES IN THE SERIES WILL BE BASED ON THIS CONFERENCE: - A HISTORY OF WATER, SERIES 3, VOL. 1: CLIMATE CHANGE AND WATER SYSTEMS. - A HISTORY OF WATER, SERIES 3, VOL. 2: WATER, HEALTH AND SOCIAL DEVELOPMENT. - A HISTORY OF WATER, SERIES 3, VOL. 3: WATER AND LAW. AS PART OF THE CONFERENCE, TEN PHD STUDENTS FROM THE NORDIC COUNTRIES WILL BE INVITED TO PRESENT AND DISCUSS THEIR PROJECTS	ØSTIGÅRD	TERJE FORSKER		UNIVERSITETET I BERGEN	DET SAMFUNNSVITENSKAPELIGE FAKULTET		01-01-11	31-12-13	RCN	NORWAY
191035		NUMERICAL MODELING OF SEDIMENT TRANSPORT IN WATER RESERVOIRS		THE PROJECT WILL DEVELOP A THREE-DIMENSIONAL COMPUTER MODEL THAT CAN SIMULATE THE FLUSHING OF SAND AND SILT FROM WATER RESERVOIRS. THE ACCUMULATION OF SEDIMENTS IN RESERVOIRS IS LARGE PROBLEM WORLDWIDE, REDUCING AGRICULTURAL PRODUCTION IN DEVELOPING COUNTRIES AND HYDRO POWER AS A CLEAN RENEWABLE EMISSION-FREE ENERGY SOURCE. THE PROJECT WILL COLLECT FIELD DATA FROM EXISTING RESERVOIR TO FIND SHORTCOMINGS OF OUR CURRENT NUMERICAL MODEL. WE WILL COOPERATE WITH THE TECHNICAL UNIVERSITY OF GRAZ, WHERE THEY HAVE CONSIDERABLE DATA AND ON-GOING PROJECTS ON FIELD AND LABORATORY DATA COLLECTION. GIVEN THE CHALLENGES OF THE COMPLEX RESERVOIR FLUSHING PROCESSES, IT WILL BE NECESSARY TO DEVELOP NEW PARTS FOR THE MODEL, INCLUDING IMPROVED FREE SURFACE ALGORITHMS. THE RESULTS WILL BE PUBLISHED ON INTERNATIONAL CONFERENCES AND IN INTERNATIONAL JOURNALS WITH PEER-REVIEW. ALSO, WEB PAGES WITH RESULTS FROM THE PROJECT WILL BE MADE.	OLSEN	NILS REIDAR BØE PROFESSOR		NTNU FAK FOR INGENIØRVITENSKAP OG TEKN			01-07-09	01-01-13	RCN	NORWAY
200632		NOVEL ELECTRIC GENERATORS AND GRID COUPLING SOLUTIONS FOR HYDRO POWER STATIONS		SUCCESSFUL ACHIEVEMENT OF THE GOALS IMPLIES MEETING THE FOLLOWING CHALLENGES: - MECHANICAL INTEGRATION OF THE MACHINE AND, POSSIBLY, CONVERTER INTO THE TURBINE. - DIRECT AND MIXED COUPLING OF PM MACHINES TO THE GRID. - DINAMIC OPERATION DUE TO PRESSURE INSTABILITY (PULSATIONS). - MECHANICAL FIELD CONTROL. - MEDIUM VOLTAGE (MV) STATOR WORKING DIRECTLY IN WATER. - SEGMENTATION OF STATOR. - INTERDISCIPLINARY COMPETENCE REQUIRED FROM THE DESIGNERS. - CREATION OF VARIABLE SPEED TURBINE PROVIDING HIGHER SYSTEM EFFICIENCY. MANY OF THE LISTED CHALLENGES CORRESPOND TO NEW ACADEMIC TOPICS, FIRST OF ALL MIXED COUPLING TO THE GRID, MECHANICAL FIELD CONTROL, SEGMENTATION OF THE STATOR. MOREOVER, APPLYING THE NOVELTIES TOGETHER LEADS TO SYNERGY EFFECT AND MAKES THE PROJECT ADVANCED COMPARED TO STATE OF THE ART SOLUTIONS. THE PROJECT RESULTS WILL FORM THE NEW KNOWLEDGE WITHIN THE FIELD OF SPECIAL PM MACHINES IN GENERATION MODE, THEIR TOPOLOGIES, DESIGN, ETC. TO BUILD A THEORETICAL BASIS AND PRACTICAL DESIGN COMPETENCE FOR THE APPLICATION AREA IT IS PLANNED TO ESTABLISH 1 PHD STUDY AT NTNU ON EL-MAG SYSTEM MODELING (3D FEA ON SUPER-COMPUTERS). THE MAIN WAYS TO MEET THE R&D CHALLENGES ARE: - WORKING	NODDELAND	BØRGE PROSJEKTLEDER		SMARTMOTOR AS			01-01-10	30-06-15	RCN	NORWAY
215934		IMPROVED DEVELOPMENT AND MANAGEMENT OF ENERGY AND WATER RESOURCES		CLIMATE CHANGE AND THE NEEDED REDUCTIONS IN THE USE OF FOSSIL FUELS CALL FOR THE DEVELOPMENT OF RENEWABLE ENERGY SOURCES. TO ENSURE THE OPTIMUM USE OF NATURAL RESOURCES AND MINIMISE THE ENVIRONMENTAL FOOTPRINT, ENVIRONMENTAL INDICATORS CAN BE APPLIED TO ALLOW COMPARISON ACROSS ENERGY PRODUCTION CATEGORIES. ECOMANAGE'S MAIN OBJECTIVE IS TO TEST, EVALUATE AND ADAPT NEW CONCEPTS AND INDICATORS FOR THE IMPROVED DEVELOPMENT AND MANAGEMENT OF ENERGY AND WATER RESOURCES. SECONDARY OBJECTIVES ARE TO: 1. DEVELOPA CONSISTENT FRAMEWORK FOR THE CALCULATION OF ENERGY PAYBACK RATIO-VALUES (EPR) FOR DIFFERENT ELECTRICITY GENERATION TECHNOLOGIES WHICH ALLOWS FOR RELIABLE COMPARISONS AND BENCHMARKING BETWEEN TECHNOLOGIES. FURTHERMORE, TO APPLY THE DEVELOPED METHODOLOGY TO A NUMBER OF NORWEGIAN HYDROPOWER PLANTS AND BENCHMARK WITH INTERNATIONAL STUDIES. 2. DEVELOP A METHODOLOGY FOR THE ASSESSMENT OF WATER CONSUMPTION IN HYDROPOWER PLANTS, ALLOWING COMPARISON WITH OTHER ELECTRICITY PRODUCTION TECHNOLOGIES, AND CARRY OUTPILOT STUDIES. 3. DEMONSTRATE THE APPLICABILITY OF THE ECOSYSTEM SERVICES IN IDENTIFYING THE FULL SOCIAL COSTS OF HYDROPOWER DEVELOPMENT AND DESIGNING	SUNDT	HÅKON		SINTEF ENERGI AS			01-01-12	03-12-16	RCN	NORWAY

221674		SUSTAINABLE HYDROPOWER DEVELOPMENT IN CHINA AND NORWAY TO MEET FUTURE DEMANDS		FUTUREHYDRO WILL FOCUS ON HYDROPOWER AND PUMPED HYDROSTORAGE DEVELOPMENT AND THEIR ENVIRONMENTAL IMPACTS IN THE CONTEXT OF RENEWABLE ENERGY EXPANSION. IN ORDER TO MEET THE GROWING DEMAND OF RENEWABLE ELECTRICITY IN CHINA AND EUROPE, EXTENSIVE PROJECTS FOR DEVELOPING HYDROPOWER AND PUMPED HYDRO-STORAGE TO BALANCE INTERMITTENT ENERGY SOURCES HAVE BEEN PLANNED. IN NORWAY, THE USE OF EXISTING RESERVOIRS TO BALANCE THE EUROPEAN INTERMITTENT ENERGY SOURCES IS MOTIVATED BY THE STRONG DEVELOPMENT OF INTERMITTENT RENEWABLE ENERGY TO MEET THE EU TARGETS. HOWEVER, HYDROPOWER AND PUMPED HYDRO-STORAGE MAY HAVE NEGATIVE IMPACTS ON THE ENVIRONMENT, SUCH AS MODIFICATION OF PHYSICAL CONDITIONS AND DETERIORATION OF EXISTING ECO-SYSTEMS IN STORAGE RESERVOIRS AND DOWNSTREAM RIVERS. THE PROJECT'S OBJECTIVE IS TO DEVELOP AND EXCHANGE SCIENTIFIC KNOWLEDGE BETWEEN NORWAY AND CHINA REGARDING THE IMPLEMENTATION OF HYDROPOWER AND PUMPED HYDRO-STORAGE TO BALANCE INTERMITTENT ENERGY SOURCES. EMPHASIS WILL BE PUT ON STAKEHOLDER INTERACTION, ESTABLISHMENT OF LONG-TERM COLLABORATION BETWEEN NORWEGIAN AND CHINESE PARTNERS AND TO CREATE AWARENESS ABOUT HOW HYDROPOWER CAN CONTRIBUTE TO THE OPTIMAL MIX OF	HARBY	ATLE RESEARCHER		SINTEF ENERGI AS			03-09-12	03-05-15	RCN	NORWAY
225873		STOCHASTIC OPTIMISATION MODEL FOR SCANDINAVIA WITH INDIVIDUAL WATER VALUES AND GRID RESTRICTIONS		IN FUTURE, THE SCANDINAVIAN POWER SUPPLY SYSTEM WILL HAVE CLOSER CONNECTIONS WITH EUROPE AND AN INCREASING PROPORTION OF UNCONTROLLABLE RENEWABLE GENERATION FROM, FOR EXAMPLE, WIND AND UNREGULATED HYDROELECTRIC SYSTEMS. THERE IS THEREFORE A NEED TO DEVELOP A NEW MODEL WHICH TAKES INTO ACCOUNT UNPREDICTABLE FLUCTUATIONS IN UNREGULATED GENERATION. POWER SUPPLY SYSTEMS AND ENERGY MARKETS ON THE CONTINENT ARE EVOLVING RAPIDLY. SCANDINAVIAN MARKET PLAYERS AND SYSTEM OPERATORS ARE FACED WITH MAJOR INVESTMENT DECISIONS CONNECTED WITH POSSIBILITIES FOR IMPROVED FLEXIBILITY OF THE GENERATION SYSTEM (POWER OUTPUT EXPANSIONS AND PUMPING SCHEMES) AND AN INCREASE IN THE NUMBER OF CABLE CONNECTIONS TO EUROPE. FROM A NORWEGIAN PERSPECTIVE, IT IS IMPORTANT TO MAKE SUSTAINABLE DECISIONS AS TO WHETHER TO INVEST IN ADDITIONAL CABLES TO THE CONTINENT AND IMPROVEMENTS IN THE FLEXIBILITY OF THE HYDROELECTRIC GENERATING SYSTEM. CO-ORDINATED DEVELOPMENT OF FLEXIBILITY IN THE GENERATING SYSTEM AND CABLES TO OTHER COUNTRIES WILL CALL FOR ACCURATE AND VERIFIABLE MODELLING WHICH DOCUMENTS THE PROFITABILITY AND CONSEQUENCES OF INVESTMENTS. THE BENEFIT OF FLEXIBILITY WILL INCREASE AND CORRECT ASSESSMENT OF ITS VALUE WILL BECOME INCREASINGLY IMPORTANT. THE AIM OF THE PROJECT IS TO DEVELOP A COMPUTER PROGRAM TO SIMULATE	MO	BIRGER SENIOR FORSKER		STATNETT SF			01-01-13	31-12-16	RCN	NORWAY
225897		NEW WEATHER RADAR BASED PRECIPITATION PRODUCTS ADAPTED TO INFLOW FORECASTING AND HYDROPOWER SCHEDULING		THE AIM IS TO DEVELOP NEW WEATHER RADAR BASED PRECIPITATION PRODUCTS ADAPTED TO THE NEEDS OF THE HYDROPOWER COMPANIES. THE NEW PRODUCTS WILL USE RADAR DATA BOTH FOR ASSIMILATION INTO A NUMERICAL WEATHER PREDICTION MODEL AND FOR ESTIMATING GROUND PRECIPITATION. AN IMPROVEMENT IN THE QUALITY OF THE PRECIPITATION INPUT CAN DIRECTLY TRANSLATE INTO BETTER INFLOW FORECASTS AND LEAD TO AN INCREASED BENEFIT AND A MORE EFFICIENT USE OF WATER FOR HYDROPOWER PRODUCTION. THIS IS IS ALSO A BENEFIT FOR THE NATION AS A WHOLE. THE NEED FOR BETTER PRECIPITATION PRODUCTS MAY BE EVEN MORE IMPORTANT IN A FUTURE ENERGY MARKET WHERE NON-REGULATED RENEWABLE ENERGY RESOURCES, INCLUDING SMALL SCALE HYDROPOWER, WIND POWER, AND SOLAR POWER WILL BE USED TO A LARGER EXTENT. THEN HYDROPOWER WILL BE ESSENTIAL FOR BALANCING PURPOSES AND TO STRENGTHEN THE FLEXIBILITY AND ROBUSTNESS OF THE ENERGY SYSTEMS. THE NEED FOR BALANCING WILL BE ON BOTH NATIONAL AND EUROPEAN SCALE AND THUS INCREASE THE POSSIBILITIES FOR NORWEGIAN HYDROPOWER PRODUCERS TO MAXIMIZE THEIR PROFITS IN AN EUROPEAN ELECTRICITY MARKET. THE MAIN R&D CHALLENGES ARE A) TO PROVIDE BEST POSSIBLE RADAR DATA(REFLECTIVITY AND WIND) THAT	ENGELAND	KOLBJØRN		ENERGI NORGE AS			01-02-13	31-12-15	RCN	NORWAY
208188	CEDREN	CEDREN - CENTRE FOR ENVIRONMENTAL DESIGN OF RENEWABLE ENERGY – INFRASTRUCTURE		BIRDS BEING ELECTROCUTED MAY E.G. RESULT IN POWER OUTAGES AND THUS HAVE AN ECONOMIC IMPACT, AND BIRDS COLLIDING WITH WIND TURBINES OR POWER LINES MAY NEGATIVELY AFFECT THE SOCIETAL PERCEPTION OF AND ACCEPTANCE FOR RENEWABLE ENERGY. THE DEVELOPMENT OF ON- AND OFFSHORE WIND ENERGY AND ASSOCIATED POWER LINES GIVES YET ANOTHER PERSPECTIVE FOR KNOWLEDGE NEEDS, PARTICULARLY IN NORWAY, AS THE DIVERSE AND FAR REACHING COASTLINE, INCLUDING THE OFFSHORE ARCHIPELAGO AND SHALLOW WATERS, CREATES THE MOST IMPORTANT EUROPEAN HABITAT FOR MIGRATING AND RESIDENT SEA AND COASTAL BIRDS. THE INTERACTION BETWEEN RENEWABLE ENERGY SYSTEMS AND ECOSYSTEMS RAISES MAJOR CHALLENGES FOR INDUSTRY AND SOCIETY. AVIAN RADAR TECHNOLOGY GREATLY EXTENDS THE OBSERVATION- AND DATA-COLLECTION CAPABILITIES FOR MONITORING BIRD MOVEMENTS IN ADVERSE ENVIRONMENTAL SETTINGS, AND EXPERIMENTALLY INVESTIGATING THE EFFECTIVENESS OF MITIGATION MEASURES. THE INFRASTRUCTURE IS ENVISIONED TO BE DIRECTLY EMPLOYED WITHIN RESEARCH ACTIVITIES DIRECTLY TIED TO THE CEDREN PROJECTS BIRDWIND AND OPTIPOL. IT WILL THUS FACILITATE HIGH-PRIORITY RESEARCH THAT IS OF WIDESPREAD NATIONAL AND INTERNATIONAL	BEVANGER	KJETIL FORSKER		SINTEF ENERGI AS			01-07-10	31-12-12	RCN	NORWAY

212706	CEDREN	CEDREN - CENTRE FOR ENVIRONMENTAL DESIGN OF RENEWABLE ENERGY - INFRASTRUCTURE 2011		IN ORDER TO IN DETAIL BE ABLE TO INVESTIGATE AND ASSESS THE IMPLICATIONS OF HYDROPOWER DEVELOPMENT IN AN ENVIRONMENTAL CONTEXT, EQUIPMENT/INFRASTRUCTURE FOR MEASURING AND ANALYSING IN SITU/CHANGING/POST-CHANGE SITUATIONS IS OF VITAL IMPORTANCE. IN DETAIL, THERE IS A NEED FOR ACQUIRING AND UPDATING INFRASTRUCTURE IN RELATION TO POTENTIAL WATER TEMPERATURE, WATER QUALITY, METEOROLOGICAL CONDITIONS, HYDROMORPHOLOGICAL RIVER DYNAMIC CHANGE AND DEPENDENT RIVER SYSTEM PARAMETERS LIKE DISCHARGE, WATER VELOCITIES, WATER LEVEL AND PARTICLE MOVEMENT IN THREE DIMENSIONS. OTHER VITAL NEEDS IN RELATION TO ECOLOGICAL INDICATORS OF CHANGE INCLUDE BEAVER, OTTER AND BIRDS. IN ADDITION, CEDREN ARE WORKING ON GREENHOUSE GAS MEASUREMENTS AND ANALYSIS, A RAPIDLY EXPANDING TOPIC IN RELATION TO CURRENT AND FUTURE HYDROPOWER DEVELOPMENT IN GENERAL, SPECIFICALLY RELATED TO HYDROPOWER RESERVOIRS ON A GLOBAL SCALE. IN UNDERSTANDING THE SCOPE AND RANGE OF THIS TOPIC IT IS NECESSARY TO CONDUCT EFFECTIVE MEASUREMENT CAMPAIGNS, USING UPDATED INFRASTRUCTURE.	SUNDT	HÅKON		SINTEF ENERGI AS			01-09-11	31-12-13	RCN	NORWAY
217424		VERIFICATION OF NEW WATER TRACERS FOR RESERVOIR CHARACTERIZATION		FOR DECADES, TRACERS HAVE BEEN USED TO ANALYSE TRANSPORT OF INJECTED WATER OR GAS IN OIL RESERVOIRS, AS PART OF OIL COMPANIES EFFORTS TO OPTIMISE OIL PRODUCTION. A CONCENTRATED PULSE OF TRACER IS INJECTED ALONG WITH THE INJECTION WATER. THE COMMUNICATION, TRANSPORT TIME, SWEEP VOLUMES AND ALLOCATION FACTORS CAN BE CALCULATED BY ANALYSING SAMPLES TRACER COLLECTED FROM PRODUCTION WELL. TECHNOLOGY RELATED TO FLOW MEASUREMENT AND RESERVOIR MONITORING IS BECOMING INCREASINGLY IMPORTANT AS OIL FIELDS MATURE AND MORE COST INTENSIVE PRODUCTION METHODS ARE INTRODUCED. WITH HIGH OIL PRICE, THE VALUE CONTRIBUTION FROM INCREASED OIL RECOVERY (IOR) IS SIGNIFICANT, AND THIS CONTRIBUTES TO A GROWING MARKET FOR ACCURATE MONITORING TECHNIQUES. TRACER TECHNOLOGY DIFFERS FROM ALTERNATIVE METHODS, SUCH AS LOGGING TOOLS, WELL TESTING PROCEDURES AND 4D;INTRUSIVE (NO INFLUENCE ON NORMAL PRODUCTION PROCEDURES) THERE ARE VERY STRICT DEMANDS FOR TRACER SELECTION IN ORDER TO OBTAIN RELIABLE RESULTS. THEREFORE THE NUMBER OF TRACERS AVAILABLE FOR USE IN LARGE OIL RESERVOIRS IS LIMITED. IFE TODAY SUPPLIES ABOUT 30 DIFFERENT WATER TRACERS TO THE MARKET. SOME OF THESE TRACERS ARE NOT SUITABLE FOR ALL	LANDSGÅRD	TERJE DIREKTØR PORTEFØLJEUTVIKLING		KJELLER INNOVASJON AS			01-01-12	31-07-14	RCN	NORWAY
204066		INTEGRATED HEALTH RISK MANAGEMENT FOR URBAN AND PERI-URBAN WASTEWATER IRRIGATION		WORLDWIDE, MORE THAN 20 MILLION HA OF AGRICULTURAL FIELDS IN URBAN AND PERI-URBAN AREAS ARE IRRIGATED WITH DILUTED, PARTLY DILUTED AND UNTREATED WASTEWATER (FUTURE HARVEST, 2001). THE BENEFITS OF THE PRACTICE ARE ENORMOUS. IT SUSTAINS THE LIVELIHOOD OF POOR URBAN FARMERS, ENHANCES URBAN FOOD SECURITY, REDUCES PRESSURE ON POTABLE WATER SUPPLY SYSTEMS, PROVIDES AN OPTION FOR WASTEWATER MANAGEMENT AND IMPROVES ENVIRONMENTAL QUALITY BY DIVERTING WASTEWATER TO AGRICULTURAL FIELDS. HOWEVER, THE PRACTICE CAN ALSO BE COUNTER-PRODUCTIVE ON PUBLIC HEALTH AND LEAD TO THE EROSION OF ALL THE AFOREMENTIONED BENEFITS IF NOT UNDERTAKEN IN A SAFE MANNER. THIS IS THE CASE IN MOST URBAN AND PERI-URBAN AREAS IN DEVELOPING COUNTRIES WHERE WASTEWATER IRRIGATION IS LARGELY INFORMAL AND WASTEWATER TREATMENT FACILITIES FOR SAFE IRRIGATION ARE EITHER INADEQUATE OR NON-EXISTENT. IN THESE COUNTRIES, WASTEWATER IRRIGATION HAS BEEN IDENTIFIED AS A SIGNIFICANT RISK FACTOR FOR DIARRHOEAL AND HELMINTH DISEASE TRANSMISSION. IT IS ALSO INCREASINGLY ASSOCIATED WITH MOSQUITO VECTOR BORNE DISEASES.THE CHALLENGE THUS IS HOW TO OPTIMIZE THE BENEFITS OF WASTEWATER IRRIGATION WITHOUT	SEIDU	RAZAK FORSKER		UNIVERSITETET FOR MILJØ- OG BIOVITENSKAP	INSTITUTT FOR MATEMATISKE REALFAG OG TEKNOLOGI		01-01-11	31-12-13	RCN	NORWAY
213624		FLOWS AND PRACTICES: THE POLITICS OF INTEGRATED WATER RESOURCES MANAGEMENT (IWRM) IN AFRICA		INTEGRATED WATER RESOURCES MANAGEMENT (IWRM) HAS EMERGED AS A KEY APPROACH IN THE WATER SECTOR IN THE PAST DECADE. HOWEVER, IWRM HAS NOT PRODUCED THE ANTICIPATED SOCIO-ECONOMIC, POLITICAL AND ECOLOGICAL OUTCOMES DUE TO THE UNCERTAINTY AND COMPLEXITY OF RIVER BASINS AND THE PLURAL, OVERLAPPING AND COMPETING FORMAL AND INFORMAL LEGAL AND CUSTOMARY SYSTEMS IN THE AFRICAN CONTEXT. OUR RESEARCH SEEKS TO LINK IDEAS OF IWRM AS CONSTRUCTED AT THE GLOBAL AND EUROPEAN LEVEL TO THEIR TRANSLATION INTO NARRATIVES AND PRACTICES IN EASTERN AND SOUTHERN AFRICA (TANZANIA, MOZAMBIQUE, SOUTH AFRICA AND ZIMBABWE). THIS RESEARCH WILL CRITICALLY EXAMINE THE INTERPRETATIONS AND CHALLENGES OF IWRM, HOPEFULLY CONTRIBUTING TO IMPROVING WATER POLICIES AND PRACTICES AND MAKING THEM LOCALLY APPROPRIATE. FROM AN AFRICAN PERSPECTIVE, OUR RESEARCH IS OF FUNDAMENTAL IMPORTANCE AS THERE IS A HUGE POTENTIAL TO CONSIDERABLY IMPROVE THE AVAILABILITY OF WATER FOR POVERTY REDUCTION AND INCLUSIVE GROWTH. IWRM WILL INTRODUCE NEW NORMATIVE ORDERS WHICH OPENS UP SPACES FOR REFORM BUT ALSO CLOSES DOWN A NUMBER OF ALTERNATIVE FRAMINGS AND OPPORTUNITIES FOR VARIOUS ACTORS. THIS MAKES IT IMPORTANT TO ASK WHO	MEHTA	LYLA PROFESSOR		Noragric UNIVERSITETET FOR MIL	INSTITUTT FOR INTERNASJONALE MILJØ- OG	UTVIKLINGSSTUDIER	01-04-12	31-12-14	RCN	NORWAY

222783		CLIMATE COSMOPOLITICS: WATER CONFLICTS AND CITIZENSHIP IN THE ERA OF CLIMATE CHANGE IN THE PERUVIAN ANDES		THIS PROJECT EXPLORES THE INTERSECTIONS OF CLIMATE CHANGE, ECONOMY, COSMOLOGIES AND CITIZENSHIP IN THE PERUVIAN ANDES. PERU´S ECONOMY IS ONE OF THE FASTEST GROWING IN LATIN AMERICA, IN GREAT PART DUE TO THE MINING INDUSTRY. YET, LARGE PARTS OF THE POPULATION, ESPECIALLY INDIGENOUS PEOPLE IN THE ANDEAN HIGHLANDS, ARE STILL EXCLUDED FROM THIS GROWTH, AND FIND THEMSELVES INCREASINGLY VULNERABLE IN TERMS OF GLOBAL WARMING AND WATER SCARCITY. ALTHOUGH PERU CONTRIBUTE VERY LITTLE OF THE WORLD'S CARBON DIOXIDE EMISSIONS, GLOBAL WARMING IS PRODUCING OBSERVABLE EFFECTS ON TEMPERATURE, PRECIPITATION, SEASONALITY, GLACIER RETREAT AND WATER SUPPLY. CONFLICTS OVER WATER HAVE INTENSIFIED DURING THE LAST FEW YEARS, AND SOCIAL MOVEMENTS NOT ONLY QUESTION ECONOMIC AND ENVIRONMENTAL POLICIES, BUT ALSO ISSUES OF SOCIAL EXCLUSION AND INCLUSION, GENDER EQUALITY AND CITIZENSHIP. AN IMPORTANT CONCERN WILL BE TO INVESTIGATE THE EFFECTS OF GLOBAL CLIMATE CHANGE ON LOCAL ENVIRONMENTS, ECONOMIC LIFE, POLITICAL ORGANIZATIONS, AND CULTURAL PRACTICES, AND EXPLORE HOW PEOPLE ;CAMANÁ WATERSHED IN AREQUIPA REGION: A POOR HERDING COMMUNITY IN THE HEADWATER BASIN; AND A NEW TOWN IN THE MAJES PAMPA, WHICH HAS	STENSRUD	ASTRID FORSKER		UNIVERSITETET I OSLO	DET SAMFUNNSVITENSKAPELIGE FAKULTET		01-01-13	31-12-16	RCN	NORWAY
196639		TRACKING SIGNATURES OF ADAPTIVE DIVERSIFICATION DURING POSTGLACIAL COLONIZATION: THE BUILD-UP OF GENOMIC ISOLATION IN THREESPINE STICKLEBACK		WE WILL STUDY THE ADAPTIVE DIVERSIFICATION IN THE POLYMORPHIC / EURYHALINE THREESPINE STICKLEBACK AT GENOMIC AND PHENOTYPIC SCALES DURING COLONIZATION FROM THE OCEAN TO FRESHWATER. FOUR LATERAL PLATE MORPHS ARE FOUND, WHERE A COMPLETELY PLATED MORPH DOMINATES IN THE OCEAN, A PARTIALLY PLATED MORPH IN BRACKISH WATER, AND A LOW PLATED MORPH IN FRESHWATER. IN A FEW LAKES, A FOURTH MORPH LACKING LATERAL PLATES CAN BE FOUND. THIS SALINITY GRADIENT IS VIEWED AS AN EVOLUTIONARY TEMPORAL TRANSECT WHERE POPULATIONS ADAPT TO LOCAL SELECTION PRESSURES, AND WHERE HYBRIDIZATION AND ADAPTIVE INTROGRESSION OCCUR IN CONTACT ZONES. WE AIM AT DETECTING SELECTION ON PHENOTYPES IN THE WILD, SEARCH FOR SIGNATURES OF SELECTION, ADAPTIVE INTROGRESSION AND DRIFT ALONG THE GENOME, AND ILLUMINATE HOW PHENOTYPES ARE LINKED TO GENOMIC DIVERGENCE, STUDYING MECHANISMS BEHIND HETEROGENOUS GENOMIC DIVERGENCE IN A FRAMEWORK OF EVOLUTIONARY PARALLELISM. WE APPLY A SNP GENOME;PLATED MORPHS, ADDING 10 LAKES WITH THE NO;UP OF GENOMIC AND REPRODUCTIVE ISOLATION ALONG THE COLONIZATION/ADAPTATION TRAJECTORY OF STICKLEBACKS.	VØLLESTAD	LEIF ASBJØRN PROFESSOR		UNIVERSITETET I OSLO	DET MATEMATISK-NATURVITENSKAPELIGE FAKULTET		15-04-10	31-12-14	RCN	NORWAY
213610		THE ROLE OF PARASITES IN FOOD-WEB TOPOLOGY AND DYNAMICS OF SUBARCTIC LAKES		FOOD WEBS CONSTITUTE AN IMPORTANT BIOLOGICAL CONCEPT, DEPICTING ECOLOGICAL COMMUNITIES AS DETAILED NETWORKS OF TROPHIC INTERACTIONS. PARASITES HAVE RARELY BEEN INCLUDED IN FOOD-WEB STUDIES, DESPITE THEIR OMNIPRESENCE AND THE FACT THAT PARASITISM REPRESENTS THE MOST COMMON CONSUMER STRATEGY AMONG ORGANISMS. WITH A GROWING AWARENESS OF THE POTENTIAL IMPORTANCE OF PARASITES IN TROPHIC NETWORKS, THERE HAS RECENTLY BEEN A COMPREHENSIVE CALL FOR THEIR INCLUSION IN FOOD-WEB ANALYSES. THE PROPOSED PROJECT ADDRESSES KEY ISSUES RELATED TO THE TOPOLOGY AND FUNCTIONING OF FOOD WEBS WITH SPECIAL EMPHASIS ON THE ROLE OF PARASITES, USING SUBARCTIC LAKES AS A MODEL SYSTEM. TWO CONTRASTING BUT COMPLIMENTARY APPROACHES ARE EMPLOYED; THE FIRST BEING RELATED TO THE ESTABLISHMENT AND ANALYSIS OF THE DETAILED STRUCTURE OF A WHOLE-LAKE FOOD WEB INCLUDING PARASITES IN A SUBARCTIC LAKE ECOSYSTEM, AND THE LATTER TO THE INVESTIGATIONS OF A KEY SUB-WEB INTERACTION MODULE (FISH PREDATORS, THEIR PREY AND THEIR TROPHICALLY TRANSMITTED PARASITES) IN TIME (LONG-TERM WITHIN-LAKE VARIATIONS) AND SPACE (BETWEEN-LAKE VARIATIONS). THE ADOPTED FRAMEWORK FACILITATES IN-DEPTH EXPLORATION OF THE IMPORTANCE OF	AMUNDSEN	PER-ARNE PROFESSOR		UNIVERSITETET I TROMSØ	FAKULTET FOR BIOVITENSKAP	FISKERI OG ØKONOMI	01-06-12	31-05-15	RCN	NORWAY
193358	SedyMONT	TIMESCALES OF SEDIMENT DYNAMICS, CLIMATE AND TOPOGRAPHIC CHANGE IN MOUNTAIN LANDSCAPES (SEDYMONT) - ERDALEN AND BØDALEN SITE PROJECT		THE FOCUS OF THIS NORWEGIAN INDIVIDUAL PROJECT (IP 5) WITHIN SEDYMONT IS ON THE ERDALEN AND BØDALEN CATCHMENTS (TRIBUTARY STREAMS) IN NORDFJORD, WESTERN NORWAY. BOTH VALLEYS PROVIDE, BASED ON THE ONGOING RESEARCH IN BOTH CATCHMENTS, EXCELLENT OPPORTUNITIES TO INTEGRATE EXISTING AND DETAILED QUANTITATIVE KNOWLEDGE ON HOLOCENE PROCESS RATES WITH NEW DATA ON SUB;DAY SEDIMENT AND SOLUTE FLUXES AS WELL AS SEDIMENT SOURCES, DENUDATION RATES AND METEOROLOGICAL AND TOPOGRAPHIC /LANDSCAPE MORPHOMETRIC CONTROLS OF DENUDATIVE PROCESSES. IN ADDITION TO STANDARD METHODS FOR MONITORING BEDLOAD TRANSPORT, INNOVATIVE TECHNIQUES LIKE SHOCK SENSORS AND BIOFILM ANALYSIS WILL BE APPLIED TO ANALYSE CHANNEL STABILITY / MOBILITY AND BEDLOAD TRANSPORT RATES IN BOTH VALLEYS. SAMPLES OF FILTERED SURFACE WATER AND SUSPENDED PARTICULATE MATERIAL COLLECTED ON FILTERS WILL BE COMPILED TO ESTIMATE THE PARTICULATE AND DISSOLVED LOADS OF RUNOFF FROM THE ERDALSBREEN GLACIER IN ERDALEN AND THE BØDALSBREEN GLACIER IN BØDALEN. THE VOLUME AND COMPOSITION OF LAKE SEDIMENTS WILL BE STUDIED USING ECHOSOUNDER, GEORADAR AND CORING. INVESTIGATIONS ON VOLUMES AND ARCHITECTURE OF STORAGE ELEMENTS (VALLEY INFILLS, TALUS	BEYLICH	ACHIM A FORSKER		NTNU SAMFUNNSFORSKNING AS			01-01-09	01-01-13	RCN	NORWAY

197378		COMBINING MULTI-COMPARTMENT SAMPLER AND GEOPHYSICAL TECHNIQUES FOR MONITORING CONTAMINANT TRANSPORT IN SOILS		POLLUTION OF SOILS IS A WIDESPREAD PROBLEM AND IS AN IMPORTANT PART OF THE STILL TO BE IMPLEMENT SOIL DIRECTIVE (EU). SOLUTE TRANSPORT IS STRONGLY AFFECTED BY HETEROGENEITY. THIS EFFECT NEEDS TO BE UNDERSTOOD TO IMPROVE RISK ASSESSMENT, MONITORING, AND TREATMENT STRATEGIES FOR NATURAL ATTENUATION IN AN OPTIMAL WAY BOTH ENVIRONMENTALLY AND COST EFFECTIVELY. THIS PROJECT AIMS AT DEVELOPMENT OF INTEGRATED TECHNOLOGIES AND MODELLING TOOLS FOR SOIL CONTAMINATION ASSESSMENT AND SITE CHARACTERISATION AT THE SCALE OF MANAGEMENT DECISIONS (FIELD SCALE).MULTI;TEMPORAL RESOLUTION DATAOF CONTAMINANT TRANSPORT PROVIDED BY THE MCS AT FIELD SCALE BEEN COMBINED WITH DIFFERENT GEOPHYSICAL METHODS. IN THIS PROJECT THE MCS WILL BE MODIFIED TO MEET THE NEEDS FOR MORE FLEXIBLE USE AND BE COMBINED WITH 2D GEOPHYSICAL TECHNIQUES. THE MCS WILL BE EQUIPPED WITH INSTRUMENTATION FOR GEOPHYSICAL MEASUREMENTS, AND MCS WATER SAMPLES WILL PROVIDE GROUND TRUTH FOR THE GEOPHYSICAL METHODS. IN THIS PROPOSAL INNOVATIVE INTEGRATION OF MCS AND GEOPHYSICAL TECHNIQUES, AND MODELLING, WILL BE USED TO IMPROVE OUR PROCESS UNDERSTANDING OF CONTAMINANT TRANSPORT AND FOR OPTIMISING	BLOEM	ESTHER FORSKER		BIOFORSK JORD OG MILJØ ÅS			01-01-10	31-07-14	RCN	NORWAY
207700		REFERENCE CONDITIONS FOR PHOSPHORUS RUNOFF FROM FORESTED AREAS WITH ARABLE SOIL PROPERTIES (218902)		THE MAIN OBJECTIVE OF THIS PROJECT IS TO DEVELOP A METHODOLOGY TO ASSESS THE CONTRIBUTION OF PHOSPHORUS RUNOFF FROM CLAY;;RICH SOILS, SOIL; DEVELOP AN IMPROVED METHODOLOGY AND MANAGEMENT TOOL FOR ESTIMATING BACKGROUND CONTRIBUTIONS OF P IN AREAS DOMINATED BY CLAY;PHOSPHORUS. WATERS IN THESE AREAS ARE EXPECTED TO HAVE HIGHER REFERENCE LEVELS OF TOTAL PHOSPHORUS (TP). SEVERAL ABATEMENT PLANS TO REDUCE TP FROM AGRICULTURAL STREAMS HAVE POINTED OUT THAT THE PRESENTLY ASSUMED REFERENCE CONDITIONS ARE BASED ON INSUFFICIENT KNOWLEDGE. THE RESULT MAY BE TOO STRICT GOALS, WITH SUBSEQUENT REQUIREMENTS FOR ABATEMENT MEASURES AND, THUS, NEGATIVE ECONOMICAL CONSEQUENCES FOR THE AGRICULTURAL SECTOR.THE PROJECT WILL SEEK TO ASSESS REFERENCE CONDITIONS OF PHOSPHORUS THROUGH MORE THAN ONE APPROACH TO DEVELOP A ROBUST METHODOLOGY AND MANAGEMENT TOOL FOR FINDING REFERENCE CONDITIONS. IT IS EXPECTED THAT THIS WILL HAVE IMPLICATIONS FOR THE IMPLEMENTING OF THE WFD IN NORWAY, AND ALSO BE OF INTEREST IN OTHER EUROPEAN COUNTRIES. THE PROJECT WILL RESULT IN AT LEAST FOUR PEER REVIEWED SCIENTIFIC PAPERS, AND POPULARIZED INFORMATION WILL ALSO BE PRIORITIZED SO THAT	BECHMANN	MARIANNE FORSKER		BIOFORSK			01-01-12	31-12-16	RCN	NORWAY
183360		VANN: TOWARDS A BETTER UNDERSTANDING OF BLOOM-FORMING TOXIC CYANOBACTERIA		BLOOMS OF TOXIC CYANOBACTERIA ARE A MAIN CONSEQUENCE OF FRESHWATER EUTROPHICATION. DESPITE CONSIDERABLE RESEARCH EFFORTS, THE BLOOM FORMING CAPACITY OF CYANOBACTERIA, THEIR HIGH COMPETITIVE STRENGTH, AND THE REGULATION OF CYANOBACTERIAL TOXINS IN NATURE ARE STILL WEAKLY UNDERSTOOD. THIS CAUSES UNCERTAINTIES IN PLANNING LAKE RESTORATION AND PREVENTS PREDICTION OF HEALTH AND ECOLOGICAL RISKS. THE GAPS IN KNOWLEDGE ALSO PRESENT A MAJOR OBSTACLE IN MEETING THE DEMAND OF THE EU WATER FRAMEWORK DIRECTIVE TO REDUCE THE LEVEL OF EUTROPHICATION UNTIL 2015, WHICH IN MANY LAKES WILL REQUIRE EFFECTIVE MANAGEMENT OF TOXIC CYANOBACTERIA. THE PRESENT PROJECT EMBARKS ON A NEW STRATEGY OF CYANOBACTERIAL RESEARCH BY CONSIDERING THE LATELY DISCOVERED CO-OCCURRENCE OF DISTINCT ECOTYPES WITHIN CYANOBACTERIAL POPULATIONS. NOVEL GENETIC AND BIOCHEMICAL METHODS, ALLOWING FOR THE FIRST TIME FIELD STUDIES AT ECOTYPE LEVEL, WILL BE ESTABLISHED AND USED TO ILLUMINATE THE EFFECTS OF EUTROPHICATION, LAKE RESTORATION AND NATURAL ENVIRONMENTAL FLUCTUATIONS. UTILISING HISTORICAL AND NEWLY COLLECTED SAMPLES, THE PROJECT WILL COVER A TIME PERIOD OF UP TO 35 YEARS. THE PROBABILITY OF SUCCESS IS INCREASED BY INVOLVING A NUMBER	ROHRLACK	THOMAS FORSKER		NORSK INSTITUTT FOR VANNFORSKNING			01-01-08	01-01-13	RCN	NORWAY
183762		FORURENS: EFFECTS-DIRECTED IDENTIFICATION OF EMERGING SUBSTANCES		IDENTIFYING NEW ENVIRONMENTAL POLLUTANTS IS ONE OF THE GREATEST CHALLENGES THAT FACES ENVIRONMENTAL SCIENTISTS. THIS PROPOSAL WILL DEVELOP AND APPLY ADVANCED EFFECTS-DIRECTED ANALYSIS (EDA) TECHNIQUES THAT WILL INTEGRATE MODERN QUANTITATIVE RECEPTOR BASED REPORTER ASSAYS WITH ADVANCED ANALYTICAL CHEMISTRY, TO IDENTIFY EMERGING SUBSTANCES IN SAMPLES COLLECTED FROM THE NORWEGIAN ENVIRONMENT. THROUGH THE DEVELOPMENT OF AN INTERNATIONALLY RENOWNED GROUP OF SCIENTISTS AN UNIQUE LEARNING ENVIRONMENT HAS BEEN CREATED FOR A PHD CANDIDATE WHOM WILL DEVELOP AND APPLY THE TECHNIQUES. SAMPLES FROM THE ARTIC, UPLAND AREAS AND NORWAYS LARGEST LAKE WILL BE FIRST SCREENED USING RECEPTOR BASED IN VITRO ASSAYS AND EDA USED TO IDENTIFY THE COMPOUNDS RESPONSIBLE. THE OUTPUT WILL BE A LIST OF EMERGING SUBSTANCES KNOWN TO OCCUR IN THE NORWEGIAN ENVIRONMENT AND HAVE SPECIFIC ECOTOXICOLOGICAL EFFECTS (ESTROGENIIC, ANTI-ESTROGENIC, ANDROGENIC, ANTI-ANDROGENIC, THYROID HORMONE RECEPTOR AGONISTS AND ANTAGONISTS, ANTIBIOTIC AND DIOXIN-LIKE TOXIC EFFECTS). THE OUTPUT WILL BE OF OUTSTANDING VALUE TO MONITORING AUTHORITIES AND THE ENVIRONMENTAL SCIENCE COMMUNITY AT LARGE.	THOMAS	KEVIN V. FORSKNINGSLEDER		NORSK INSTITUTT FOR VANNFORSKNING			01-03-08	01-04-14	RCN	NORWAY

183986	CPmonitor	VANN: ADVANCED MONITORING OF THE INTRODUCED CRAYFISH PLAGUE (APHANOMYCES ASTACI) FOR IMPROVED MANAGEMENT OF ENDANGERED FRESHWATER CRAYFISH		APHANOMYCES ASTACI IS A SPECIALIZED PARASITE ON NORTH AMERICAN FRESHWATER CRAYFISH. ACCIDENTAL INTRODUCTION OF A. ASTACI TO EUROPE RESULTED IN THE LETHAL CRAYFISH PLAGUE (CP). LATER INTRODUCTIONS OF NORTH AMERICAN CARRIER CRAYFISH TO EUROPE HAS ACCELERATED CP SPREAD AND ESTABLISHED CONSTANT INFECTION RESERVOIRS. DUE TO CP, EUROPEAN FRESHWATER CRAYFISH ARE ENDANGERED, AND THE CRAYFISH BUSINESSES SUFFER GREAT ECONOMICAL LOSSES. IN NORWAY, CP IS LISTED AS A GROUP A DISEASE, AND INTRODUCTION OF CARRIER CRAYFISH IS PROHIBITED. SEVERAL OUTBREAKS OF CP HAVE WIPED OUT NORWEGIAN POPULATIONS OF NOBLE CRAYFISH, AND ILLEGALLY INTRODUCED CARRIER CRAYFISH WAS RECENTLY DETECTED. GROWING EVIDENCE INDICATE THAT CP MAY PERSIST LONGER THAN PREVIOUSLY THOUGHT, WHICH COMPLICATES RE;GENOTYPES WILL BE DEVELOPED IN COLLABORATION WITH ACTIVE PROJECT PARTNERS. THE PROJECT INVOLVES COLLABORATION WITH REPUTED NATIONAL AND INTERNATIONAL INSTITUTIONS THAT WILL ENSURE NEEDED COMPETENCE, PROVIDE RELEVANT STUDY AREAS, AND ENHANCE RESEARCH NETWORKING.	VRÅLSTAD	TRUDE FORSKER		VETERINÆRINSTITUTTET			17-11-08	08-02-13	RCN	NORWAY
184002	BIOCLASS-FRESH	VANN: BIOLOGICAL INDICATORS FOR CLASSIFICATION OF ECOLOGICAL STATUS IN FRESHWATER		THE MAIN OBJECTIVE OF BIOCLASS-FRESH IS TO DEVELOP AND VALIDATE BIOLOGICAL INDICATORS SUITABLE FOR CLASSIFICATION OF ECOLOGICAL STATUS IN RIVERS AND LAKES IN LINE WITH THE EU WATER FRAMEWORK DIRECTIVE. THE PROJECT WILL BUILD UPON THE RESULTS OF RECENT PROJECTS AND EXPAND FURTHER BY FOCUSING ON STILL MISSING INDICATORS FOR EUTROPHICATION AND ACIDIFICATION OF RIVERS AND LAKES, SUCH AS PHYTOPLANKTON BLOOMS, BENTHIC ALGAE, LITTORAL INVERTEBRATES AND FISH. THE PROJECT WILL ALSO INCLUDE INDICATORS FOR HYDROMORPHOLOGICAL PRESSURES ON MACROPHYTES, BENTHIC FAUNA AND FISH. EXISTING AND NEW MONITORING DATA WILL BE COMPILED AND ANALYSED, INCLUDING PALEO-ECOLOGICAL DATA TO VALIDATE REFERENCE CONDITIONS FOR SELECTED INDICATORS. A SERIES OF DIFFERENT STATISTICAL AND MODELLING TECHNIQUES WILL BE USED TO IDENTIFY POTENTIAL THRESHOLDS AND TO QUANTIFY THE UNCERTAINTY IN THE RESPONSE CURVES OF THE INDICATORS ALONG THE DIFFERENT PRESSURE GRADIENTS. THE RESULTS WILL BE USED TO RECOMMEND BOUNDARIES BETWEEN THE DIFFERENT CLASSES OF ECOLOGICAL STATUS FOR THE SELECTED BIOLOGICAL QUALITY ELEMENTS, AND TO ESTIMATE UNCERTAINTY OF VARIOUS WAYS OF COMBINING THE DIFFERENT METRICS INTO A HOLISTIC CLASSIFICATION OF WATER BODIES.	SOLHEIM	ANNE LYCHE FORSKNINGSLEDER		NORSK INSTITUTT FOR VANNFORSKNING			02-01-08	31-03-13	RCN	NORWAY
190028	EUTROPIA	TVERS: WATERSHED EUTROPHICATION MANAGEMENT THROUGH SYSTEM ORIENTED PROCESS MODELLING OF PRESSURES, IMPACTS AND ABATEMENT ACTIONS.		IMPACT ASSESSMENT OF CHANGES IN ENVIRONMENTAL PRESSURES REQUIRES IMPROVED SYSTEM AND PROCESS UNDERSTANDING TO REACH THE KNOWLEDGE LEVEL NEEDED FOR SUSTAINABLE WATER RESOURCE MANAGEMENT AS WELL AS MEETING FUTURE DEMANDS FROM THE EU WATER FRAMEWORK DIRECTIVE (WFD). BOTH CONVENTIONAL AND WFD RESOURCE MANAGEMENT REQUIRE A CATCHMENT;SUPPORT TOOL. IN CONCLUDING, THE SOCIETAL RESPONSE TO HOW LOCAL AND PROVINCIAL GOVERNMENT DEAL WITH EUTROPHICATION IS STUDIED USING THE BAYES MODEL. THE PROJECT THEREBY COMPILE RESEARCH AND MONITORING PROJECTS AT MORSA, BUILD ON CONCLUSIONS AND IDENTIFIED KNOWLEDGE GAPS, AND BRING THE SCIENCE ANOTHER STEP TOWARDS MORE POLICY RELEVANT KNOWLEDGE. THE AIMS ARE FIRST TO INCREASE OUR ABILITY TO MONITOR NUTRIENT FRACTIONS ENABLING US TO OBTAIN A BETTER UNDERSTANDING OF THE CATCHMENT PROCESSES GOVERNING VARIATION IN LEVELS AND FLUXES OF NUTRIENT. THEREBY WE WILL ACHIEVE A MORE ACCURATE PARAMETERISATION OF CONCEPTUALLY BASED IMPACT OF AND RESPONSE PREDICTION MODELS. THE NEXT AIM IS TO FACILITATE DEVELOPMENT OF SUSTAINABLE MANAGEMENT PRACTICES BY ESTIMATING THE INTEGRATED UNCERTAINTIES LINKED TO SIMULATED ENVIRONMENTAL IMPACTS AS WELL AS TO SOCIETAL RESPONSES TO THE IMPLIED ABATEMENT STRATEGIES BY MEANS OF	VOGT	ROLF DAVID PROFESSOR		KJEMISK INSTITUTT, UNIVERSITETET I OSLO			01-01-09	31-08-13	RCN	NORWAY
196270	ENPERA	FORURENS: ENGINEERED NANOPARTICLE INTERACTIONS WITH THE ENVIRONMENT: TOWARDS A BETTER UNDERSTANDING OF THE RISK THEY POSE		ENGINEERED NANOPARTICLES (ENPS) ARE SYNTHETIC PARTICLES WITH AT LEAST ONE DIMENSION <100 NM IN SIZE. THEIR USE IS WIDESPREAD, VARIED AND IS INCREASING ALL OF THE TIME. ALTHOUGH THERE IS A CONSIDERABLE AMOUNT OF ATTENTION CURRENTLY BEING PAID TO THE BEHAVIOUR AND EFFECTS OF ENGINEERED ENPS, THERE IS STILL ONLY LIMITED SOLID INFORMATION AVAILABLE. IT IS CLEAR THAT MAN?S USE OF NANOMATERIALS WILL RESULT IN THEIR RELEASE INTO THE ENVIRONMENT GIVEN THAT THEY ARE PRESENT IN HOUSEHOLD PRODUCTS AND ARE INDEED ENTERING THE ENVIRONMENT. THIS PROPOSAL WILL SEEK TO BETTER UNDERSTAND THE FATE AND SUBSEQUENT EXPOSURE OF ENPS IN ORDER TO IMPROVE ENVIRONMENTAL RISK ASSESSMENTS THROUGH THE FOLLOWING OBJECTIVES:1. WHICH FACTORS INFLUENCE THE ENVIRONMENTAL FATE AND BEHAVIOUR OF ENPS.2. WHETHER 'TOXIC' ENPS EXERT EFFECTS UNDER ENVIRONMENTALLY RELEVANT CONDITIONS.3. HOW WILL ENPS INFLUENCE THE EFFECTS OF CONVENTIONAL CONTAMINANTS?4. THE FATE OF SELECTED ENPS IN WASTEWATER TREATMENT PLANTS. 5. ASSESS WHETHER NANO;INVESTIGATORS, DR. BENEDEK PLÓSZ, MOVING FROM NIVA TO THE TECHNICAL UNIVERSITY OF DENMARK (DTU). DR PLÓSZ, AN EXPERT IN WASTEWATER TREATMENT, WILL LEAD THE WASTEWATER FATE EXPERIMENTS	THOMAS	KEVIN V. FORSKNINGSLEDER		NORSK INSTITUTT FOR VANNFORSKNING			01-03-10	31-12-13	RCN	NORWAY

196295	MERINO	FORURENS: ENVIRONMENTAL MERCURY IN NORWAY: BIOGEOCHEMICAL, MICROBIOLOGICAL AND BIOACCUMULATION PROCESSES DRIVING INCREASED MERCURY IN FISH		BRAND NEW RESULTS FROM A SURVEY OF MERCURY (HG) CONCENTRATIONS IN FRESH WATER FISH IN SOUTH-EASTERN NORWAY SHOW A HIGHLY SIGNIFICANT TREND TOWARDS INCREASING HG IN FISH, DESPITE DECREASING ATMOSPHERIC DEPOSITION. THE PROJECT WILL INVESTIGATE POSSIBLE DRIVERS FOR THIS APPARENT CONTRADICTION. DRIVERS MAY BE INCREASING CONCENTRATIONS OF DISSOLVED ORGANIC MATTER (DOM) AND INCREASED MOBILIZATION OF METHYL MERCURY (MEHG), INCREASED LENGTH OF THE SEASON WITH SUITABLE CONDITIONS FOR BACTERIA MEDIATED MERCURY METHYLATION, SHIFTS IN THE FOOD WEB STRUCTURE AND INCREASED SULPHUR POOL IN THE SOILS AND SEDIMENTS WHERE METHYLATION OCCURS. INCREASES IN CONCENTRATIONS OF DOM AND TEMPERATURE MAY ALSO INCREASE NET IN-LAKE METHYLATION BECAUSE OF REDUCED PHOTO-DEMETHYLATION (LESS LIGHT) AND ENHANCHED MICROBIAL METHYLATION. ADDITIONALLY, INCREASED CONCENTRATIONS OF DOM AND MEHG MAY GIVE INCREASED ACCUMULATION OF MEHG AT THE ENTRY-LEVEL OF THE FOOD WEB, E.G. THROUGH INCREASED USE OF DOM AS CARBON SOURCE FOR AQUATIC ORGANISMS AND CHANGES IN THE STRUCTURE, HABITAT PREFERENCES AND PHYSIOLOGICAL RATES IN THE FOOD WEB. THE PROJECT IS ORGANIZED IN SIX INTERLINKED ACTIVITIES: A COMPLEMENTARY SURVEY OF HG	LARSSEN	THORJØRN FORSKNINGSLEDER		NORSK INSTITUTT FOR VANNFORSKNING			01-04-10	30-06-13	RCN	NORWAY
196318	alterREACH	FORURENS: NON-ANIMAL (ALTERNATIVE) TESTING METHODS FOR REACH		THE REGISTRATION, EVALUATION, AUTHORISATION AND RESTRICTION OF CHEMICAL SUBSTANCE (REACH) IS THE NEW EUROPEAN COMMUNITY REGULATION ON CHEMICALS AND THEIR SAFE USE. ESTIMATES INDICATE THAT AS MUCH AS 30,000 SINGLE CHEMICALS MAY BE REQUIRED TO BE REGISTERED WITH A POTENTIALLY RISK ASSESSMENT REQUIREMENT BASED ON SUBSTANCE;DISCIPLINARY AND HIGHLY INTEGRATED WITH PARTNERS FROM KEY ENVIRONMENTAL INSTITUTES IN GERMANY, UNITED KINGDOM, SWITZERLAND AND NORWAY WILL AND THE PROJECT WILL BE LEAD BY THE NORWEGIAN INSTITUTE FOR WATER RESEARCH (NIVA). THE PROPOSED PROJECT WILL SUPPORT BOTH RESEARCH BY ESTABLISHED RESEARCH GROUPS AS WELL AS EDUCATION OF ONE PHD AND 3 MS. SC. STUDENT TO BE WORKING IN THE DIFFERENT COLLABORATING LABORATORIES.	TOLLEFSEN	KNUT-ERIK FORSKER		NORSK INSTITUTT FOR VANNFORSKNING			01-08-10	31-12-14	RCN	NORWAY
196332		VANN: ALLEE EFFECTS IN ATLANTIC SALMON CAUSED BY PARASITE INFESTATION AND INTERSPECIFIC HYBRIDISATION WITH BROWN TROUT		WE PROPOSE TO INVESTIGATE THE POSSIBILITY THAT STRONG REDUCTION OF ATLANTIC SALMON (SALMO SALAR) POPULATION SIZES CAUSED BY INFESTATION OF THE PARASITE GYRODACTYLUS SALARIS, COUPLED WITH INCREASING RATES OF INTERSPECIFIC HYBRIDISATION BETWEEN ATLANTIC SALMON AND BROWN TROUT (S. TRUTTA), MIGHT LEAD SALMON POPULATIONS INTO LOCAL EXTINCTION BY POSITIVE DENSITY;TERM AFFECTED RIVERS. THE PROJECT WILL BE CARRIED OUT BY AN INTERNATIONALLY STRONG RESEARCH TEAM OF FISH POPULATION ECOLOGISTS AND GENETICISTS, PARASITOLOGISTS, EVOLUTIONARY BIOLOGISTS, BIOSTATISTICIANS AND MODELLERS, AND WILL RECRUIT RESEARCH PERSONNEL AT THE PHD AND POSTDOC LEVELS.	HINDAR	KJETIL FORSKNINGSSJEF		STIFTELSEN NORSK INSTITUTT FOR NATURFORSKNING NINA			01-01-10	30-06-13	RCN	NORWAY
196336	COMSAT	VANN: BIODIVERSITY, COMMUNITY SATURATION AND ECOSYSTEM FUNCTION IN LAKES		EMPIRICAL AND THEORETICAL RESULTS INDICATE THAT HIGH BIODIVERSITY INCREASES THE ADAPTABILITY TO CHANGE, THE PREDICTABILITY OF ECOSYSTEM SERVICES, AND THE RESISTANCE TO BIOLOGICAL INVASIONS. LAKES ARE IDEAL SYSTEMS FOR TESTING PREDICTIONS AND RESPONSES RELATED TO BIODIVERSITY SINCE THEY ARE UNITS WITH WELL;SCALING BY PREDICTIVE MODELING TOOLS. STATISTICAL MODELING WILL ALSO BE USED TO DISENTANGLE EFFECTS OF MULTIPLE STRESSORS LIKE EUTROPHICATION, CLIMATE CHANGE, AND INVADING SPECIES ON THE ECOSYSTEM SERVICES OF LAKES.	ANDERSEN	TOM FØRSTEAMANUENSIS		UNIVERSITETET I OSLO	BIOLOGISK INSTITUTT		01-03-10	28-02-13	RCN	NORWAY
196407	WAPABAT	SAMFUNN: WATER POLLUTION ABATMENT IN A SYSTEM OF MULTI-LEVEL GOVERNANCE: A STUDY OF NORWAY'S IMPLEMENTATION OF EUS WATER FRAMEWORK DIRECTIVE		THERE IS NEED FOR SCIENTIFIC KNOWLEDGE AND COMPETENCE RELATED TO THE IMPLEMTATION OF THE WFD IN NORWAY. THE ECOSSYSTEM AND CROSS;LEVEL SYSTEM OF GOVERNANCE, OUR STUDY WILL EXAMINE THE COMPLETE CHAIN OF IMPLEMENTATION OF THE WFD, FROM THE STARTING POINT AT THE SUPRA NATIONAL EU LEVEL AND DOWN TO THE REGIONAL AND LOCAL LEVELS. THE STUDY ADRESSES FOUR MAIN RESEARCH QUESTIONS: 1. IN WHAT WAYS DO THE WFD DIRECTIVE AND EU EXECUTIVE BODIES (I.E. CIS) STRUCTURE AND CONTRIBUTE TO THE PRACTIAL DOMESTIC IMPLEMENTATION PROCESS? HOW DOES THE RELATIONSHIP BETWEEN THE PRINCIPLE OF HOMOGENOUS IMPLEMENTATION AND THE NEED FOR LOCAL AND ECOSYSTEM BASED DIFFERENTATION PLAY OUT IN PRACTICE? 2. TO WHAT EXTENT IS WFD IMPLEMENTATION PROCESSES FACILITATED BY THE ORGANIZATIONAL MODELS USED BY THE SUB DISTRICTS AND RBD? 3. WHAT CHARACTERISES THE SPECIFIC PROBLEM CONSTELLATIONS OF THE SUB DISTRICTS IN STUDY, AND HOW DOES THIS AFFECT THE ORGANISATION, ACTIVE INVOLVEMENT OF INTEREST GROUPS, MEASURES AND GOAL ATTAINMENT OF THE WFD? 4. WHAT ACTUAL MEASURES DO THE SUB DISTRICTS TAKE TO OBTAIN THE AIMS OF THE WFD? HOW APPROPRIATE AND ADEQUATE ARE THESE MEASURES FOR IMPROVED WATER	KLAUSEN	JAN ERLING FORSKER		NORSK INSTITUTT FOR BY- OG REGIONFORSKNING			01-07-10	30-06-13	RCN	NORWAY

196420		VANN: GENETIC AND ENVIRONMENTAL FACTORS INFLUENCING PATHOGENICITY IN THE INTERACTION BETWEEN GYRODACTYLUS SALARIS AND ITS SALMONID HOSTS		THIS PROJECT SEEKS TO EVALUATE THE FACTORS CONTRIBUTING TO PATHOGENICITY OF GYRODACTYLUS SALARIS IN INFECTIONS OF NORWEGIAN SALMON. PATHOGENICITY IS A RESULT OF HOST AND PARASITE GENOTYPES, AND OF THE INTERACTION OF EACH OF THESE FACTORS WITH ENVIRONMENTAL FACTORS. PREVIOUS WORK ON G. SALARIS PATHOGENICITY HAS FOCUSSED ON THE IMPORTANCE OF HOST GENOTYPE, IN PARTICULAR RESEARCHING THE DIFFERENT OUTCOMES OF INFECTIONS WITH THE SOUTHERN NORWEGIAN LIER STRAIN OF G. SALARIS WITH A RANGE OF DIFFERENT SALMON STOCKS. IN THIS PROJECT WE WILL UTILISE A WIDER RANGE OF GENETICALLY CHARACTERISED G. SALARIS STRAINS, INCLUDING A NORTH NORWEGIAN SALMON PATHOGENIC STRAIN, THE PALSBUFIORDEN CHARR INFECTING STRAIN AND A RAINBOW TROUT INFECTING STRAIN. LIFETIME REPRODUCTIVE OUTPUT OF WORMS ON A RANGE OF SALMONID STOCKS WILL BE CALCULATED UNDER COMMON GARDEN LABORATORY CONDITIONS. THE ENVIRONMENT IN WHICH PARASITES ARE MAINTAINED WILL BE MODIFIED TO EXAMINE THE EFFECT OF ENVIRONMENT ON PARASITE POPULATION GROWTH AND SEXUALITY. THE ENVIRONMENTAL FACTORS WHICH WILL BE MODIFIED ARE A). WATER PH/ALUMINIUM CONCENTRATION (A PHYSICAL FACTOR), B). HOST IMMUNE RESPONSE USING	HARRIS	PHILIP PROFESSOR		NATURHISTORISK MUSEUM, UNIVERSITETET I OSLO			01-10-10	30-09-14	RCN	NORWAY
209666	PFC-ChiNo	POLYFLUORINATED COMPOUNDS: ARE POINT SOURCES CONTAMINATING THE ENVIRONMENT;CHINO)		THE PROPOSED PROJECT IS AIMING TO INVESTIGATE THE IMPACT OF PFC EMISSIONS FROM INDUSTRIAL POINT SOURCES ON THE SURROUNDING ENVIRONMENT. BOTH IN COASTAL AND TERRESTRIAL INDUSTRIAL AREAS HUMAN FOOD ITEMS ARE HARVESTED CLOSE BY. PFCS ARE KNOWN TO BE TAKEN UP BY ANIMALS AND PLANTS AND CAN ALREADY BE FOUND IN A VERY BROAD VARIETY OF HUMAN DIET ITEMS. PFCS ARE USED IN CHINA AND NORWAY INDUSTRIALLY IN CONSIDERABLE AND INCREASING AMOUNTS WITH EMISSIONS NOT WELL UNDERSTOOD. AGRICULTURAL AREAS, DRINKING WATER RESERVOIRS AND FISHERY GROUNDS ARE EXPOSED TO PFC EMISSIONS FROM POINT SOURCES BOTH IN NORWAY AND CHINA. KNOWLEDGE IS REQUIRED: I) ON THE DEGREE AND CHARACTERISTICS OF THE PFC EMISSIONS, II) ON THE POTENTIAL UPTAKE INTO CROPS, VEGETABLES, DRINKING WATER AND ANIMALS III) ON EXPOSURE TO HUMANS LIVING CLOSE TO POTENTIAL POINT SOURCES FROM FOOD ETC., AND IV) BY LOCAL STAKEHOLDERS AND DECISION MAKERS CONCERNING RISKS AND MANAGEMENT OPTIONS. BOTH COUNTRIES WOULD GREATLY BENEFIT FROM A COMBINED EFFORT IN INDENTIFYING AND CHARACTERISING POSSIBLE PFC EMISSIONS AND FIND SOLUTIONS TO MINIMISE THE EFFECT ON THE HUMAN POPULATION. DURING THE PROJECT, DATA ON PFC POLLUTION CAUSED BY	HERZKE	DORTE SENIORFORSKER		LUFTFORSKNING	NILU - STIFTELSEN NORSK INSTITUTT FOR		01-11-11	31-12-14	RCN	NORWAY
209687	SinoTropia	WATERSHED EUTROPHICATION MANAGEMENT IN CHINA THROUGH SYSTEM ORIENTED PROCESS MODELLING OF PRESSURES, IMPACTS AND ABATEMENT ACTIONS.		IMPACT ASSESSMENT OF CHANGES IN ENVIRONMENTAL PRESSURES REQUIRES CONCEPTUAL SYSTEM AND PROCESS UNDERSTANDING IN ORDER TO REACH THE KNOWLEDGE LEVEL RELEVANT FOR SUSTAINABLE WATER RESOURCE MANAGEMENT. THIS REQUIRES A CATCHMENT-ORIENTED APPROACH TO INTEGRATE PROCESSES. THE YUQIAO RESERVOIR IS THOROUGHLY STUDIED SITE WITH LONG DATA RECORDS. USING A DPSIR APPROACH ON ITS EUTROPHICATION PROBLEM WE SET OUT TO DESIGN AND CONDUCT COHERENT AND SYNOPTIC FIELD MONITORING AND SURVEY OF FLUXES OF NUTRIENT FRACTIONS, THEREBY LAYING THE BASIS FOR AN ASSESSMENT OF CATCHMENT HYDRO-BIOGEOCHEMICAL PROCESSES GOVERNING MOBILISATION, TRANSPORT, AND FATE OF DIFFERENT FRACTIONS OF PHOSPHORUS. ON THIS BASIS WE MAY UNTANGLE THE EFFECTS OF CHANGING ENVIRONMENTAL DRIVERS SUCH AS CHANGES IN CLIMATE AND LAND-USE. THIS IS USED TO ADAPT, PARAMETERIZE AND OPTIMIZE EXISTING CATCHMENT (SWAT) AND LAKE (MYLAKE) MODELS TO SIMULATE ENVIRONMENTAL RESPONSE TO CHANGES IN PRESSURES AND DEVELOP A METHOD FOR PRE-WARNING OF TOXIC ALGAL BLOOM INCIDENCES. WE WILL ALSO IMPROVE OUR UNDERSTANDING OF SOCIETAL PROCESSES FACILITATING (OR CAUSING OBSTACLES FOR) EFFECTIVE ABATEMENT POLICIES BY	VOGT	ROLF DAVID PROFESSOR		KJEMISK INSTITUTT, UNIVERSITETET I OSLO			01-07-11	30-06-14	RCN	NORWAY
212885	Urban WATCH	LAND: CULTURAL HERITAGE AND WATER MANAGEMENT IN URBAN PLANNING		NORWEGIAN CULTURAL HERITAGE MANAGEMENT IS KNOWN FOR ITS LEADING ROLE WITH REGARDS TO IN-SITU PRESERVATION OF ARCHAEOLOGICAL DEPOSITS AND PROTECTION OF INDIVIDUAL MONUMENTS AND SITES. HOWEVER, NORWEGIAN URBAN SURFACE- AND GROUNDWATER MANAGEMENT IS INTERNATIONALLY LAGGING BEHIND ON IMPLEMENTATION OF INNOVATIVE SUSTAINABLE SOLUTIONS AS WELL AS IMPROVEMENT OF LEGISLATIVE ISSUES. THIS ALSO LEADS TO TENSION IN LOCAL PLANNING SYSTEMS, ESPECIALLY IN URBAN AREAS. CULTURAL HERITAGE PROTECTION CAN OFTEN BE RELATEDTO WATER. EITHER WATER AS A PRESERVING AGENT OF VULNERABLE ORGANIC DEPOSITS OR FOUNDATIONS, OR WATER AS A FACTOR THAT MAY STABILISE OR DESTABILISE THE GROUND THAT BEARS OUR BUILDINGS AND MONUMENTS. CULTURAL HERITAGE PROTECTION IS THEREFORE OFTEN RELATED TO SURFACE - AND GROUNDWATER MANAGEMENT. THIS POSES A THREAT, CERTAINLY IN VIEW OF CLIMATE CHANGE AND THE CURRENT NEED TO ADAPTATION IN URBAN WATER SYSTEMS. THE CHALLENGE IS TO ENHANCE URBAN WATER MANAGEMENT PRACTISE, AND INTEGRATE CULTURAL HERITAGE MANAGEMENT EARLY IN URBAN LAND- AND WATER PLANNING PROCESSES TO AVOID LOSS OF CULTURAL VALUES. BY FACILITATING THIS INTEGRATION, URBAN WATCH WILL CONTRIBUTE IN SAFEGUARDING VULNERABLE CULTURAL HERITAGE ABOVE AND BELOW THE	MUTHANNA	TONE MERETE FORSKER		NORSK INSTITUTT FOR VANNFORSKNING			01-04-12	31-03-15	RCN	NORWAY

221373		FORURENS: IS THE COCKTAIL EFFECT OF ENVIRONMENTAL CONTAMINANTS A THREAT FOR ARCTIC FISH POPULATIONS?		IT IS WELL KNOWN THAT THE ARCTIC IS BEING AFFECTED BY A RANGE OF CONTAMINANTS, AND THAT LEVELS IN TOP PREDATORS ARE HIGH ENOUGH TO CAUSE EFFECTS. WHILE WE ARE RAPIDLY GAINING AN UNDERSTANDING OF HOW INDIVIDUAL CONTAMINANTS AFFECT COMMUNITIES, INVESTIGATIONS OF THE EFFECTS OF DIVERSE CONTAMINANT MIXTURES IN AQUATIC COMMUNITIES ARE RARE. MANY STUDIES ON ARCTIC ORGANISMS HAS SHOWN CORRELATIONS BETWEEN CONTAMINANT CONCENTRATIONS AND DIFFERENT PHYSIOLOGICAL RESPONSES, BUT THE ACTUAL CAUSE - EFFECT RELATIONSHIP IS USUALLY NOT IDENTIFIED, AND IT IS NOT CLEAR WHICH CONTAMINANT IS CAUSING THE EFFECT. THE OVERALL OBJECTIVE OF THE PROJECT PROPOSED HERE IS TO INVESTIGATE HOW CONTAMINANT COCKTAILS AFFECT THE PERFORMANCE OF ARCTIC CHARR (SALVELINUS ALPINUS), AS WELL AS HOW POSSIBLE INTERACTIONS BETWEEN DIFFERENT CONTAMINANTS AFFECT THE OBSERVED RESPONSES. WE INTEND TO USE A COMBINED APPROACH, USING IN VITRO TESTS AND FIELDBASED STUDIES, TO INCREASE THE KNOWLEDGE CONCERNING EFFECTS OF CONTAMINANT COCKTAILS ON ARCTIC ANIMALS. THE FIELDSTUDIES WILL BE CARRIED OUT IN TWO LAKES ON BJØRNØYA: LAKE ELLASJØEN AND LAKE LAKSVATN. THE TWO LAKES ARE LOCATED IN CLOSE PROXIMITY, BUT HAVE VERY DIFFERENT	EVENSET	ANITA RESEARCHER		AKVAPLAN NIVA AS			01-01-13	31-12-15	RCN	NORWAY
221391	NanoCharM	FORURENS NANOPARTICLE CHARACTERISATION IN ENVIRONMENTAL MEDIA: LINKING EXPOSURE TO EFFECTS		DESPITE THE RESEARCH INITIATIVES TAKEN DURING THE PAST DECADE, THERE REMAINS A CONSIDERABLE AMOUNT OF UNCERTAINTY ABOUT THE TOXICITY OF NANOPARTICLES (NPS) RELEASED INTO THE ENVIRONMENT. ONE OF THE MAJOR SOURCES OF UNCERTAINTY IN ECOTOXICOLOGICAL TESTS IS THE SHORTAGE OF DATA ON CHEMICAL CHARACTERIZATION OF NP IN ENVIRONMENTAL AND EXPOSURE MEDIA. OUR CENTRAL HYPOTHESIS IS THAT THIS LACK OF KNOWLEDGE IS UNDERMINING THE ROBUSTNESS OF ECOTOXICOLOGICAL STUDIES. WITHOUT THIS INFORMATION, THE EFFECTS OF NP CAN BE EITHER UNDER OR OVERESTIMATED, RESULTING IN A LACK OF CONFIDENCE IN THE SCIENTIFIC RESULTS. THE PROJECT PROPOSES TO ADDRESS THIS ISSUE THROUGH THE DEVELOPMENT AND APPLICATION OF METHODS AND EXPERIMENTAL PROTOCOLS FOCUSED SPECIFICALLY ON THE DETECTION AND CHARACTERIZATION OF NP IN TEST MEDIA. WE WILL USE THREE CONTRASTING TYPES OF NPS ;STUDIES TO COMPARE THE BIOAVAILABILITY AND EFFECTS OF NANOPARTICLES AND IONIC SPECIES IN TEST ORGANISMS. THE OUTPUTS OF THE PROJECT WILL BE DOCUMENTATION OF METHOD APPLICABILITY FOR DIFFERENT NPS, OPTIMIZED TEST PROTOCOLS AND INFORMATION ON MOBILITY AND UPTAKE. SUCH DATA ARE URGENTLY REQUIRED WITHIN ECOLOGICAL RISK ASSESSMENT.	OUGHTON	DEBORAH HELEN PROFESSOR		UNIVERSITETET FOR MILJØ- OG BIOVITENSKAP	INSTITUTT FOR PLANTE- OG MILJØVITENSKAP		01-03-13	31-12-16	RCN	NORWAY
221393		VANN ; EVOLUTIONARY ECOLOGY AND HYDROLOGY - THE EFFECTS OF STREAM FLOW DYNAMICS ON THE WHITE-THROATED DIPPER		IN THIS PROJECT, WE TAKE AN INTERDISCIPLINARY APPROACH AND USE A NOVEL METHOD OF SIMULATING DAILY HYDROLOGICAL RUNOFF ON A SMALL SPATIAL SCALE AND APPLY IT TO AN EXCLUSIVE LONG-TERM STUDY OF BREEDING WHITE-THROATED DIPPERS CINCLUS CINCLUS. THIS PROPOSAL PROVIDES A UNIQUE OPPORTUNITY TO UNDERSTAND HOW VARIATION IN THE KEY LOCAL ENVIRONMENT AFFECTS THE ECOLOGY AND EVOLUTION OF A TOP PREDATOR OF FRESHWATER ECOSYSTEMS. FLOODS, DROUGHTS AND FREEZING OF THE RIVER OCCUR ON A SMALL SPATIAL SCALE DETERMINED BY THE LOCAL HYDRO-METEOROLOGY AND TOPOGRAPHY AND CAN HAVE SEVERE CONSEQUENCES INFLUENCING THE ECOLOGY AND THE EVOLUTIONARY PROCESSES. WATER FLOW DYNAMICS ALSO HAS POTENTIAL TO CHANGE DUE TO CLIMATE CHANGE AS WELL AS DUE TO RIVERINE BASIN REGULATIONS CAUSED BY HYDROPOWER PRODUCTION. WE THEREFORE PROPOSE TO ANALYSE HOW ENVIRONMENTAL VARIATION IN TERMS OF WATER FLOW DYNAMICS (B1) AFFECT BREEDING PARAMETERS AND TERRITORY OCCUPANCY, LEADING TO AN UNDERSTANDING OF HOW BIRDS PERCEIVE HABITAT QUALITY, (B2) DETERMINE THE AMOUNT OF PHENOTYPIC PLASTICITY AND ESTIMATE SELECTION AND HERITABILITY, (B3) INCLUDING KNOWLEDGE OF POPULATION AGE COMPOSITION, INFLUENCE THE	NILSSON	ANNA		UNIVERSITETET I OSLO	INSTITUTT FOR BIOVITENSKAP		25-09-13	24-09-16	RCN	NORWAY
221398	ECOREG	WATER: ECOSYSTEM RESPONSES TO DIFFERENT REGULATION REGIMES (ECOREG)		HYDROPOWER PRODUCTION, DESPITE BEING PRESENTED AS A CLEAN SOURCE OF ENERGY, FUNDAMENTALLY TRANSFORMS RIVERS, WITH CONCOMITANT CONSEQUENCES FOR RIVER ECOSYSTEMS. ECOREG AIMS AT DETECTING THE RESPONSES OF PRIMARY PRODUCERS (BENTHIC FLORA) AND PRIMARY CONSUMERS (BENTHIC MACROINVERTEBRATES) TO DIFFERENT HYDROLOGIC REGIMES IN RIVERS IN NORWAY. WE WILL FOCUS ON BENTHIC INVERTEBRATES AND BENTHIC FLORA, BECAUSE BOTH ARE MANDATORY ORGANISM GROUPS WITH RESPECT TO THE WFD. IN ADDITION, DIFFERENCES IN HYDROLOGIC REGIME ARE EXPECTED TO HIGHLY IMPACT THESE ORGANISMS, WHILE AT THE SAME TIME THE ECOLOGICAL CONSEQUENCES ARE POORLY UNDERSTOOD. WE WILL I) STUDY THE EFFECTS OF DETAILED AND CONTINUOUSLY RECORDED HYDROLOGIC REGIME ON SPECIES ASSEMBLIES AND TRAITS AT 40 REGULATED AND UNREGULATED RIVER SITES, II) STUDY BASIC ECOSYSTEM FUNCTIONS, I.E. FOOD WEB STRUCTURE AND ENERGY AND NUTRIENT FLOW IN EXPERIMENTAL FLUMES, AND THEIR REACTION TO CHANGES IN HYDROLOGIC REGIME, AND III) STUDY THE EFFECTS OF MULTIPLE STRESSORS (MAINLY EUTROPHICATION AND REGULATION) ON SPECIES ASSEMBLIES AND TRAITS BASED ON EXISTING DATA ON BIOLOGY AND WATER CHEMISTRY, WHICH WE WILL SUPPLY WITH INFORMATION ON HYDROLOGIC	SCHNEIDER	SUSANNE		NORSK INSTITUTT FOR VANNFORSKNING			01-04-13	31-03-16	RCN	NORWAY

221400	Salmotrack 2013-2016	VANN: MODELING OCEAN MIGRATION OF ATLANTIC SALMON (SALMOTRACK 2013-2016)		THE OPEN OCEAN MIGRATION IS THE MAIN PRODUCTION PHASE OF ATLANTIC SALMON, BUT ALSO THE LEAST UNDERSTOOD OF THE SPECIES LIFE CYCLE. ONLY SMALL ECOSYSTEM CHANGES AFFECTING GROWTH AND SURVIVAL CAN HAVE DRAMATIC EFFECTS, AS SEEN FOR THIS SPECIES IN THE LAST YEARS. MAPPING THE POPULATION SPECIFIC MARINE FEEDING AREAS AND UNDERSTANDING THE TEMPORAL AND SPATIAL FACTORS AFFECTING SALMON ABUNDANCE ARE THEREFORE PROBABLY THE BIGGEST CHALLENGES IN SALMON ECOLOGY TODAY. NEW DEVELOPMENT WITHIN SATELLITE TRACKING TECHNOLOGY HAS NOW FOR THE FIRST TIME MADE IT POSSIBLE TO TRACK OCEAN MIGRATING SALMON WITH MINIATURIZED POP;SCALE PROJECT, COMBINED WITH EXTENSIVE NATIONAL AND INTERNATIONAL COOPERATION AND ONE POSTDOC POSITION, THE PRESENT PROJECT AIM TO 1) MODEL THE INDIVIDUAL COMPLETE MIGRATION PATTERN OF SALMON FROM DIFFERENT LOCATIONS AROUND AND IN THE NORTH ATLANTIC OCEAN. WE WILL FURTHER 2) ANALYSE THE VERTICAL DIVING PATTERNS AND MODEL MARINE GROWTH, AS WELL AS 3) ESTIMATE THE MAIN AREA AND TIME OF MORTALITY AND IDENTIFY THEIR POSSIBLE MAIN PREDATORS. FINALLY WE WILL 4) TEST IF NESTING SUCCESS OF SEA BIRD COLONIES CAN ASSIST IN MAKING SALMON SURVIVAL PROGNOSIS. IN SUM THE SUGGESTED PROJECT WILL ADD	RIKARDSEN	AUDUN HÅVARD		UNIVERSITETET I TROMSØ	FAKULTET FOR BIOVITENSKAP	FISKERI OG ØKONOMI	01-03-13	29-02-16	RCN	NORWAY
221410	BiWA	BIODIVERSITY MANAGEMENT AND THE WATER FRAMEWORK DIRECTIVE UNDER CLIMATE CHANGE		MEASURES TO BE TAKEN IN ORDER TO RESTORE FRESHWATER ECOSYSTEMS TO GOOD ECOLOGICAL STATUS, AS REQUIRED BY THE WATER FRAMEWORK DIRECTIVE (WFD), NEED TO CONSIDER FUTURE CLIMATE CHANGE. THE DIVERSITY AND POPULATION STRUCTURE OF AQUATIC ORGANISMS ARE AFFECTED BY CLIMATE THROUGH PHYSICO;LINEAR THRESHOLD RELATIONSHIPS BETWEEN BIOLOGICAL QUALITY ELEMENTS AND PRESSURES. WE WILL THEN SUBSEQUENTLY TEST IF CLIMATE CHANGE SCENARIOS ALTER PHYSICAL AND CHEMICAL PROPERTIES OF WATER BODIES TO AN EXTENT WHERE ECOLOGICAL CLASS BOUNDARIES ARE LIKELY TO BE CROSSED, AND ASSESS HOW MANAGEMENT ACTIONS COULD MITIGATE ENVIRONMENTAL IMPACTS IN ORDER TO MEET GOOD ECOLOGICAL STATUS SET BY STATIC REFERENCE CONDITIONS. WE BELIEVE THIS COULD BE DIRECTLY APPLICABLE ALSO TO OTHER SYSTEMATIC GROUPS, NOTABLY INVERTEBRATES. THE PROJECT WILL BE CARRIED OUT AS A JOINT RESEARCH EFFORT BETWEEN MAJOR NORWEGIAN AND SWEDISH INSTITUTIONAL PLAYERS ON THE SUBJECT, AND BENEFIT FROM SYNERGIES WITH INITIATED COLLABORATION BETWEEN NINAS AND NIVAS STRATEGIC INSTITUTE INITIATIVES ON CLIMATE CHANGE.	FINSTAD	ANDERS GRAVBRØT		STIFTELSEN NORSK INSTITUTT FOR NATURFORSKNING NINA			01-03-13	29-02-16	RCN	NORWAY
221454	RIVERCONN	HYDROPOWER AND CONNECTIVITY IN INLAND RIVERS		THE IMPLEMENTATION OF THE EU WATER FRAMEWORK DIRECTIVE (WFD) REQUIRES PRESERVATION OR IMPROVEMENTS OF THE ECOLOGICAL STATUS IN LARGE RIVERS DEVELOPED FOR HYDRO ELECTRICAL PURPOSES. RIVERCONN IS DESIGNED TO ADDRESS KEY R&D CHALLENGES REQUIRED TO ACHIEVE GOOD ECOLOGICAL POTENTIAL (GEP) OR STATUS (GES) ACCORDING TO WFD IN REGULATED RIVERS. THIS IS OBTAINED BY INVESTIGATING EVOLUTIONARY AND RESILIENCE CONSEQUENCES FOLLOWING REDUCED OR LOST CONNECTIVITY CAUSED BY HYDROPOWER INSTALLATIONS. THE PRIMARY OBJECTIVE IS TO PROVIDE NEW AND FUNDAMENTAL KNOWLEDGE TO DISENTANGLE CRITERIA TO ASSESS GEP AND GES BY INVESTIGATING ECOLOGICAL AND EVOLUTIONARY CONSEQUENCES FOLLOWING CONNECTIVITY CHANGE EXPERIENCED BY GRAYLING AND BROWN TROUT IN LARGE REGULATED RIVERS. SECONDARY OBJECTIVES ARE TO 1) ESTABLISH BASIC KNOWLEDGE ON THE EFFECTS OF FRAGMENTATION INFLICTED BY HYDROPOWER DAMS ON ECOSYSTEM FUNCTIONALITY ON GRAYLING AND TROUT, 2) DEFINE LIFE HISTORY VARIATIONS, SPECIES;CONCEPT IN THE CONTEXT OF BALANCING SOCIETY?S COSTS AND BENEFITS REGARDING PRESERVATION OF CONNECTIVITY FOR GRAYLING AND TROUT AND MAINTENANCE OF SUFFICIENT HYDROPOWER PRODUCTION. IT IS ANTICIPATED	MUSETH	JON		STIFTELSEN NORSK INSTITUTT FOR NATURFORSKNING NINA			01-01-13	31-12-15	RCN	NORWAY
221455	EDRISK	ADVERSE OUTCOME PATHWAYS FOR ENDOCRINE DISRUPTION IN DAPHNIA MAGNA, A CONCEPTUAL APPROACH FOR MECHANISTICALLY-BASED RISK ASSESSMENT		ENDOCRINE DISRUPTORS (ED) HAVE RECEIVED CONSIDERABLE SCIENTIFIC ATTENTION AND IT IS TODAY COMMONLY ACCEPTED THAT A NUMBER OF EXOGENOUS COMPOUNDS HAVE THE POTENTIAL TO INTERFERE WITH THE ENDOCRINE SYSTEM OF ANIMALS AND POTENTIALLY PERTURB VITAL ENDOCRINE PROCESSES TO A DEGREE CAUSING AN ADVERSE APICAL EFFECT (OUTCOME) ASSOCIATED WITH GROWTH, DEVELOPMENT AND REPRODUCTION. ALTHOUGH KNOWLEDGE OF ED EFFECTS HAVE BEEN PREDOMINANTLY DEMONSTRATED IN VERTEBRATES, REPORTS OF ED EFFECTS IN MOLLUSCS AND CRUSTACEANS HAVE INTRODUCED A NEED TO THOROUGHLY ASSESS POTENTIAL ED EFFECTS IN NON;BASED RISK ASSESSMENT OF SINGLE COMPOUNDS AND COMPLEX MIXTURES OF THESE. THIS WILL BE ACHIEVED BY 1) IDENTIFICATION OF ED TARGETS IN D. MAGNA, 2) DEVELOP AND EVALUATE AN AOP FOR ED EFFECTS IN D. MAGNA, 3) DETERMINE THE ROBUSTNESS AND APPLICABILITY OF THE AOP AND 4) ASSIST REGULATORY DEVELOPMENT OF AOP FOR PREDICTIVE RISK ASSESSMENT. THE PROJECT WILL USE STATE OF THE ART METHODS IN PREDICTIVE (COMPUTATIONAL), IN VITRO AND IN VIVO EXPERIMENTAL APPROACHES, TOXICOGENOMICS, HISTOPATHOLOGY, ANALYTICAL CHEMISTRY AND BIOINFORMATICS TO PROVIDE DETAILED INSIGHT INTO THE ENDOCRINE SYSTEM	TOLLEFSEN	KNUT-ERIK RESEARCHER		NORSK INSTITUTT FOR VANNFORSKNING			01-04-13	31-03-16	RCN	NORWAY

222159	GLACINDIA	WATER RELATED EFFECTS OF CHANGES IN GLACIER MASS BALANCE AND RIVER RUNOFF IN WESTERN HIMALAYA, INDIA: PAST, PRESENT AND FUTURE (GLACINDIA)		THE GLACINDIA PROJECT, UNDER THE AGREEMENT OF COOPERATION IN SCIENCE & TECHNOLOGY BETWEEN THE GOVERNMENTS OF INDIA AND NORWAY, THE DEPARTMENT OF SCIENCE AND TECHNOLOGY (DST) OF THE GOVERNMENT OF INDIA AND THE RESEARCH COUNCIL OF NORWAY (RCN), SEARCHES FUNDING FOR JOINT AND COOPERATIVE RESEARCH ON WATER RELATED EFFECTS OF CHANGES IN MASS BALANCE OF GLACIERS/RIVERS. GLACINDIA WILL STRENGTHEN ESTABLISHED AND ONGOING RESEARCH ACTIVITIES BETWEEN THE PARTNERS AND MAKE SIGNIFICANT SCIENTIFIC CONTRIBUTIONS AND ADDED VALUE TO THESE ACTIVITIES. EFFECTIVE AND TARGETED DISSEMINATION OF THE RESULTS TO GOVERNMENTAL AGENCIES, STAKEHOLDERS AND THE GENERAL PUBLIC IS HIGHLY PRIORITIZED. THE PROJECT INCLUDES: (A) ARRANGING EXCHANGE VISITS (FIELD TRIPS AND CONFERENCES/ WORKSHOPS/MEETINGS) OF INDIAN AND NORWEGIAN SCIENTISTS TO THE COUNTERPART COUNTRY, (B), FUNDING OF 2 POST DOCS, AND TRAINING OF YOUNG SCIENTISTS TO PROMOTE KNOWLEDGE TRANSFER AMONG PROJECT PARTNERS. THIS PROPOSAL DRAWS ITS RESEARCH ACTIVITIES ON AN EXISTING PARTNERSHIP BETWEEN NORWAY AND INDIA (TERI-ART SCIENCE AND KNOWLEDGE TRANSFER. WE AIM AT REDUCING UNCERTAINTIES IN ONE REGION OF WESTERN HIMALAYA BY A COMBINATION OF FIELD DATA OF GLACIER MASS	NESJE	ATLE PROFESSOR		UNI RESEARCH AS			01-05-13	30-04-16	RCN	NORWAY
222195	HyCAMP	INDNOR: HYDROLOGIC SENSITIVITY TO CRYOSPHERE-AEROSOL INTERACTION IN MOUNTAIN PROCESSES (HYCAMP)		THIS PROPOSAL OUTLINES A SERIES OF ACTIVITIES DESIGNED TO RAISE THE CURRENT LEVEL OF UNDERSTANDING REGARDING THE HYDROLOGIC SENSITIVITY IN THE HINDU KUSH, KARAKORAM AND HIMALAYAN (HKKH) MOUNTAIN SYSTEM TO INTERACTION BETWEEN AEROSOLS AND THE CRYOSPHERE AND TO EXTEND THAT KNOWLEDGE TO IMPLEMENT IMPROVED HYDROLOGIC FORECASTING FOR NORWAY. SPECIFICALLY, WE INTEND TO IDENTIFY KEY EMISSION SOURCES HAVING IMPACT ON THE HIMALAYAN CRYOSPHERE AND TO CONDUCT SENSITIVITY STUDIES TO EVALUATE THE IMPACT OF THE DIFFERENT LIGHT ABSORBING AEROSOLS ON CRYOSPHERE, CLIMATOLOGICALLY.□□WATER RESOURCES ARE CENTRAL TO NORWAY'S RENEWABLE ENERGY MARKET. RELIABLE HYDROLOGICAL PREDITION IS NOT ONLY CRITICAL TO HYDROLOGIC AND ENERGY SECURITY IN NORWAY BUT ALSO MAY PROVIDE SIGNFICANT FINANCIAL BENEFITS FOR THE NORWEGIAN ENERGY MARKET. AEROSOL SOURCES FOR NORWAY ARE PREDOMINANTLY REMOTE, SO THE EMPHASIS ON THE NORWEGIAN SIDE OF THE STUDY WILL BE TO EXAMINE THE SENSITIVITY OF THE HYDROLOGIC SYSTEMS TO AEROSOL INTERACTION. THROUGH MODEL STUDIES WE WILL IDENTIFY DEFICIENCIES FOR ACCOUNTING FOR LIGHT ABOSRBING AEROSOL IN HYDROLOGIC FORECASTING AND DEVELOP STRATEGIES TO ADDRESS THE GAPS. SPECIFIC ACTIVITIES INCLUDE: *INTEGRATE STATE;BASED INVENTORY OF BLACK CARBON	BURKHART	JOHN FORSKER		NILU - STIFTELSEN NORSK INSTITUTT FOR, LUFTFORSKNING			01-06-13	31-05-16	RCN	NORWAY
222259	NORDIC-LACS	POLLUTION - NORDIC LAKE EXPOSURE TO CYCLIC SILOXANES: ASSESSMENT OF TRANSPORT, DISTRIBUTION AND FATE		ENVIRONMENTAL EMISSIONS OF CYCLIC VOLATILE METHYL SILOXANES (CVMS) IN EUROPE ARE ESTIMATED IN THE RANGE OF KILO-TONNES PER YEAR. WITH SEVERAL REPORTS DOCUMENTING HIGH CONCENTRATIONS IN THE AQUATIC ENVIRONMENT, CVMS HAVE COME UNDER EXTENSIVE REVIEW BY REGULATORY BODIES WITHIN THE EUROPE (REACH) AND NORTH AMERICA (CANADIAN CHEMICAL MANAGEMENT PLAN) REGARDING THEIR ENVIRONMENTAL PERSISTENCE, BIOACCUMULATION, AND TOXICITY. HOWEVER, UNDERSTANDING THEIR DISTRIBUTION AND FATE WITHIN THE AQUATIC ENVIRONMENT HAS BEEN HINDERED BY UNRELIABLE METHODS FOR DETERMINING TRACE LEVELS IN WATER AND SEDIMENT MATRICES. IN ADDITION TO THIS, ENVIRONMENTAL WINTER CONDITIONS IN NORDIC REGIONS MAY SLOW REMOVAL/DEGRADATION PROCESSES OF CVMS AND INCREASE THEIR PERSISTENCE AND EXPOSURE IN AQUATIC ECOSYSTEMS. THIS PROPOSAL WILL DEVELOP SENSITIVE METHODS FOR MONITORING THE DISTRIBUTION AND EXPOSURE OF CVMS AND APPLY THESE NEW METHODS TO A NORDIC LAKE SYSTEM. DATA COLLECTED WILL BE USED TO EVALUATE THE CAPABILITY OF ENVIRONMENTAL FATE AND TRANSPORT MODELS TO PREDICT THE OBSERVED BEHAVIOUR OF CVMS UNDER DIFFERENT ENVIRONMENTAL CONDITIONS. □NILU IS AN INTERNATIONAL LEADER IN CVMS	WARNER	NICHOLAS ALEXANDER		NILU - TROMSØ, NORSK INSTITUTT FOR LUFTFORSKNING			01-01-13	31-12-15	RCN	NORWAY
225462	FISHCON	BIODIVERSA: BIODIVERSITY SCENARIOS FOR FRAGMENTED LANDSCAPES FRESHWATER CONNECTIVITY AND THE FUTURE OF FISH DIVERSITY		PRESENT MODELS PREDICTING BIODIVERSITY RESILIENCE TO ENVIRONMENTAL CHANGE ARE ALMOST EXCLUSIVELY BASED ON APPROACHES THAT IGNORE DISPERSAL LIMITATIONS. NEVERTHELESS, SEVERAL RECENT STUDIES HAVE DEMONSTRATED THAT HABITAT CONNECTIVITY IS A KEY DETERMINANT OF BIODIVERSITY RESPONSES TO ANTHROPOGENIC CHANGES OF LAND USE AND CLIMATE. THIS IS PARTICULARLY EVIDENT FOR ORGANISMS LIVING IN FRESHWATER WHERE THE DENDRITIC NETWORK STRUCTURE LEADS TO UNEVEN DISPERSAL AMONG LOCALITIES AND SPECIES. IN THE PROPOSED PROJECT FISHCON WE WILL INVESTIGATE THE DYNAMIC LINK BETWEEN MANAGEMENT AND FUTURE BIODIVERSITY SCENARIOS USING FRESHWATER FISHES AS THE STUDY ORGANISMS. THE PROJECT?S MAIN OBJECTIVES ARE TO BUILD INTEGRATED SCENARIO MODELS FOR KEY BIODIVERSITY INDICATORS (FRESHWATER FISHES) USED IN EUROPEAN ENVIRONMENTAL LEGISLATION (WFD) AND TO EXPLICITLY LINK PRESENT;MANAGEMENT INTERFACE. THIS STUDY AIMS FOR THE FIRST TIME TO INTEGRATE HABITAT CONNECTIVITY INTO SCENARIOS OF BIODIVERSITY MAINTENANCE, MANAGEMENT AND RESILIENCE. WHILE PAST STUDIES HAVE EVALUATED SUITABLE FUTURE HABITATS FOR FISHES AT THE CATCHMENT SCALE, WE HAVE THE UNIQUE OPPORTUNITY TO COMBINE DETAILED LAKE AND STREAM	FINSTAD	ANDERS GRAVBRØT		STIFTELSEN NORSK INSTITUTT FOR NATURFORSKNING NINA			01-12-12	31-08-15	RCN	NORWAY

225591	LIMNOTIP	BIODIVERSA: BIODIVERSITY DYNAMICS AND TIPPING POINTS IN OUR FUTURE FRESHWATER ECOSYSTEMS		THE ACCELERATING LOSS OF GLOBAL BIODIVERSITY HAS AFFECTED SPECIES IN ALL BIOMES AND ECOSYSTEM TYPES. HOWEVER, RECENT REPORTS SUGGEST THAT FRESHWATER SPECIES ARE LOST AT A RATE HIGHER THAN IN ANY OTHER BIOME (MILLENNIUM ECOSYSTEM ASSESSMENT 2005, CONVENTION ON BIOLOGICAL DIVERSITY 2010). IN ADDITION TO THEIR MAJOR IMPORTANCE AS NATURAL HABITATS AND SOURCES OF BIODIVERSITY AT ALL LEVELS ? GENETIC, SPECIES AND ECOSYSTEMS FRESHWATER ECOSYSTEMS ALSO PROVIDE A WIDE ARRAY OF ECOSYSTEM SERVICES FOR HUMANS, INCLUDING HARVESTABLE GOODS (FISH, FIBRE, FODDER), WATER SUPPLY (DRINKING WATER, IRRIGATION, ETC), WATER STORAGE (FLOOD PREVENTION) AND SITES FOR RECREATIONAL ACTIVITIES. FURTHER, LAKES AND WETLANDS ARE IMPORTANT IN THE CARBON CYCLE DYNAMICS WITH A HIGH RATEOF CARBON STORAGE IN SOME SYSTEMS, WHILE OTHER ARE IMPORTANT CONDUITS OF CO2 AND CH4. FOR THIS REASON THEY HAVE BECOME INCREASINGLY IMPORTANT IN THE FEEDBACK PROCESSES IN A CLIMATE CHANGE CONTEXT.EVEN THOUGH FRESHWATER ECOSYSTEMS CONSTITUTE HERE WE PROPOSE A TRANS-DOC PROGRAM.	HESSEN	DAG O. PROFESSOR		UNIVERSITETET I OSLO	BIOLOGISK INSTITUTT		01-01-13	31-10-15	RCN	NORWAY
225592	BUFFER	BIODIVERSA: PARTIALLY PROTECTED AREAS AS BUFFERS TO INCREASE THE LINKED SOCIAL-ECOLOGICAL RESILIENCE		COASTAL ZONES ARE COMPLEX SOCIAL;INDUCED PRESSURES (CLAUDET ET AL. 2011). PPAS CAN THEREFORE INCREASE THE SOCIAL AND ECOLOGICAL RESILIENCE OF COASTAL SYSTEMS. HOWEVER, CONTRARY TO FULLY PROTECTED AREAS (FPAS; NO USES ALLOWED), PPAS CAN BE HIGHLY DIFFERENT ONE FROM THE OTHER. THEREFORE, IT WAS DIFFICULT FROM SINGLE PPAS TO GENERALIZE THE SPECIFIC ECOLOGICAL AND SOCIAL DRIVERS LEADING TO SUCH INCREASED RESILIENCE, AND THE COMBINED TYPES AND MAGNITUDE OF USES THEY CAN BUFFER AGAINST ARE STILL VERY POORLY UNDERSTOOD. ADDRESSING THESE QUESTIONS ARE RELEVANT AND TIMELY SINCE EUROPEAN AND ASSOCIATED COUNTRIES ARE COMMITTED THROUGH EUROPEAN AND INTERNATIONAL AGREEMENTS TO PROTECT INCREASED FRACTIONS OF THEIR COASTLINES AND SINCE PPAS ARE ALMOST SYSTEMATICALLY FAVORED AT THE EXPENSE FPAS (BECAUSE ACCOMPANIED BY GREATER SOCIAL ACCEPTABILITY).	OLSEN	ESBEN MOLAND SENIORFORSKER		FLØDEVIGEN	HAVFORSKNINGSINSTITUTTET FORSKNINGSSTASJONEN		01-10-12	30-09-15	RCN	NORWAY
223002		EFFECTS OF SULFATE AND HIGH SALT LEVELS ON ANAEROBIC TREATMENT OF WASTE WATER CONTAINING EASY DEGRADABLE ORGANICS		ANAEROBIC BIODEGRADATION HAS ENVIRONMENTAL ADVANTAGES COMPARED WITH CONVENTIONAL METHODS FOR TREATMENT OF HIGH STRENGTH WASTE WATER DUE TO LOW ENERGY DEMAND, AND BECAUSE MOST OF THE ENERGY IN THE WASTE WATER IS CONVERTED TO METHANE. THE ENERGY BUDGET IS POSITIVE; I.E., IT PRODUCES ENERGY. ANAEROBIC BIODEGRADATION CAN ALSO BE A MORE ECONOMICAL SOLUTION BECAUSE THE ANAEROBIC PROCESS DOES NOT NEED SUPPLY OF OXYGEN, HAS LOW SLUDGE PRODUCTION, AND HAS A LOW NEED FOR NUTRIENTS. CHALLENGES WITH ANAEROBIC TREATMENT IS THAT IT IS A COMPLEX PROCESS AND IS MORE SENSITIVE THAN AEROBIC TREATMENT TO ENVIRONMENTAL AND CHEMICAL FACTORS. THIS IS ONE OF THE MAIN REASONS WHY ANAEROBIC TREATMENT HAS NOT BEEN WIDELY APPLIED. CHALLENGES IN THIS CASE MAY BE THAT THE WASTE WATER OFTEN CONTAINS SULFATE AND HAVE A HIGH SALINITY LEVELS. THEREFORE, AN IMPORTANT ASPECT IN THIS PROJECT WILL BE TO IDENTIFY THE EFFECT OF THESE FACTORS IN THE WASTE THAT MAY LEAD TO PROCESS INSTABILITY AND OPERATIONAL PROBLEMS. STRATEGIES FOR CONTROLLING THESE COMPOUNDS EITHER BY PRETREATMENT OR DIRECTLY IN THE REACTOR ARE A MAJOR OBJECTIVE OF THE PROJECT. IN ADDITION, THERE ARE ENVIRONMENTAL AND OPERATIONAL FACTORS THAT	KELLER	STIG		NATURE OIL & GAS AS			01-09-12	01-09-15	RCN	NORWAY
199473		HUMAN RIGHTS AND GENDER DIMENSIONS OF WATER GOVERNANCE IN AFRICA: ACTORS, NORMS AND INSTITUTIONS		DEMOCRATIZATION, GOOD GOVERNANCE, SUSTAINABLE USE AND BROADENED ACCESS TO RESOURCES ARE CONCERNS THAT HAVE INFORMED LAND AND WATER REFORMS IN AFRICA. DESPITE FREQUENT REFERENCES TO RIGHTS-BASED APPROACHES TO DEVELOPMENT IN GENERAL, EMPIRICAL RESEARCH IDENTIFY A LACKING APPRECIATION OF WOMEN'S WATER NEEDS AND USES AND THEIR RIGHT TO HAVE A SAY IN INSTITUTIONS GOVERNING ACCESS. THE AIM OF THE PROJECT IS TO LAY AN EMPIRICAL AND LEGAL FOUNDATION FOR APPROPRIATE FRAMEWORKS AND STRATEGIES FOR INCLUSION OF THE HUMAN RIGHTS AND GENDER EQUALITY DIMENSION IN WATER GOVERNANCE. IT COMBINES EMPIRICAL RESEARCH OF WATER USES AND MANAGEMENT ON THE GROUND WITH THE STUDY OF LAWS AND POLICIES DEVELOPED AT INTERNATIONAL AND NATIONAL LEVEL IN FOUR AFRICAN COUNTRIES.WITHIN AN INTERDISCIPLINARY FRAMEWORK IT SEEKS AN UNDERSTANDING OF THE OUTCOME OF WATER GOVERNANCE PROCESSES WITH A VIEW TO HOW HUMAN RIGHTS ARE DEFINED, MOBILIZED, TRANSFORMED OR RESISTED BY DIFFERENT ACTORS, SUCH AS GOVERNMENTS, DONORS AND NGO'S. A KEY QUESTION IS WHETHER AND UNDER WHAT CONDITIONS DECENTRALIZED WATER GOVERNANCE SYSTEMS FACILITATES THE INCLUSION AND PROTECTION OF WOMEN'S WATER RIGHTS. CASES FROM	HELLUM	ANNE PROFESSOR		UNIVERSITETET I OSLO	DET JURIDISKE FAKULTET		01-07-10	31-12-13	RCN	NORWAY

199631		THE INFLUENCE OF SNOW AND ICE CHANGES ON WATER RESOURCES IN HIMALAYA		THE HIMALAYAS-HINDU KUSH, KUNLUN SHAN, PAMIR AND TIEN SHAN MOUNTAIN RANGES FUNCTION AS WATER TOWERS, PROVIDING WATER TO PEOPLE THROUGH MUCH OF ASIA. THE GLACIER AND SNOW-FED RIVERS ORIGINATING FROM THE MOUNTAIN RANGES SURROUNDING THE TIBETAN PLATEAU COMPRISE THE LARGEST RIVER RUN-OFF FROM ANY SINGLE REGION IN THE WORLD. CHANGES IN THE CLIMATIC CONDITIONS WILL IMPACT BOTH THE TIMING AND AMOUNT OF SNOW AND ICE MELT WHICH MAY HAVE CONSEQUENCES FOR A WIDE RANGE OF HUMAN ACTIVITIES LIKE AGRICULTURE, INDUSTRY AND HYDROPOWER PRODUCTION. HOWEVER THE EXACT CONTRIBUTION OF SNOW AND GLACIER MELT TO THE ASIAN RIVERS IS VERY MUCH UNCLEAR AND A WIDE RANGE OF ESTIMATES CAN BE FOUND IN THE LITERATURE. BY INITIATING A PARTNERSHIP BETWEEN THE BJERKNES CENTRE FOR CLIMATE RESEARCH, UNIVERSITY OF BERGEN AND INDIAN INSTITUTE OF TECHNOLOGY ON ANALYSIS AND MODELLING OF THE HYDROLOGICAL CYCLE IN THE HIMALAYA REGION WE AIM TO MAKE A SIGNIFICANT CONTRIBUTION TO THE KNOWLEDGE OF THE CURRENT AND FUTURE IMPORTANCE OF SNOW AND ICE ON THE MAIN RIVER CATCHMENTS IN THE REGION. EMPHASIS WILL BE PLACED ON INVERSTIGATING PROCESSES STRONGLY REALTED TO THE PLANNING AND PRODUCTION OF HYDROPOWER.	SORTEBERG	ASGEIR ASSOCIATE PROFESSOR		UNIVERSITETET I BERGEN	GEOFYSISK INSTITUTT		01-01-10	01-03-13	RCN	NORWAY
200678	ExFlood	EXTREME WEATHER IN SMALL CATCHMENTS: NEW METHOD FOR FLOOD PROTECTION		IN THIS PROJECT WE SEEK TO QUANTIFY EFFECTS OF UP- AND DOWNSTREAM MEASURES IN CATCHMENTS TO REDUCE NEGATIVE EFFECTS OF EXTREME WEATHER. THE WORK WILL INCLUDE DEVELOPMENT OF NEW MEASURES, REVIEW EXISTING MEASURES, TESTING OF THESE AND INCORPORATING THEM IN EXISTING RUNOFF MODELS TO PRODUCE A LAND USE PLANNING TOOL AVAILABLE FOR STAKEHOLDERS. THE MAJOR OBJECTIVE OF THE EXFLOOD PROJECT IS TO DEFINE AND ANALYZE MEASURES TO COMBAT NEGATIVE IMPACT OF EXTREME WEATHER EVENTS ON INFRASTRUCTURE IN SMALL WATERSHED AREAS IN NORWAY AND TO INCORPORATE THIS IN A LAND USE PLANNING TOOL. URBAN, AGRICULTURE, NATURE, AND FOREST AREAS AND INFRASTRUCTURE ELEMENTS DEMANDS DIFFERENT APPROACHES CONCERNING IMPACTS OF AND OPPORTUNITIES FOR EXTREME WEATHER EVENTS. THE APPROACH OF THE EXFLOOD PROJECT IS TO REDUCE THE PEAK FLOW AND TOTAL WATER DISCHARGE TO AVOID DAMAGES ON INFRASTRUCTURE. THREE MUNICIPALITIES CONTRIBUTE TO THE PROJECT WHERE THE PLANNING TOOL WILL BE TESTED, AND AN EXPERIMENTAL CATCHMENT SITE IS SELECTED TO CONDUCT IN DEPTH PROCESS STUDIES. ALL LAND USE ELEMENTS ARE REPRESENTED IN THIS CATCHMENT; PERI-URBAN, FOREST AND AGRICULTURAL AREAS. THE ACTIVITIES IN THE EXFLOOD PROJECT ARE ORGANIZED	STOLTE	JANNES SENIORFORSKER		BIOFORSK JORD OG MILJØ ÅS			01-07-10	01-07-13	RCN	NORWAY
200689	InfraRisk	IMPACTS OF EXTREME WEATHER EVENTS ON INFRASTRUCTURE IN NORWAY (INFRARISK)		GLOBAL WARMING WILL MOST LIKELY CHANGE THE FREQUENCY AND/OR INTENSITY OF EXTREME WEATHER EVENTS (EWES) IN MOST WORLD REGIONS. CLIMATE CHANGE AND THE RESULTING EXPECTED INCREASE IN MAJOR WEATHER-RELATED NATURAL CATASTROPHES ARE ESSENTIAL DRIVERS OF AN EXPECTED TREND OF RISING LOSSES IN THE FUTURE. SO FAR, WE HAVE ONLY LIMITED KNOWLEDGE ABOUT PAST AND FUTURE CHANGES IN EWES IMPACTING INFRASTRUCTURE IN NORWAY. WE KNOW THAT EWES CAUSE A THREAT TO INFRASTRUCTURE TODAY, BUT THERE IS STILL A GREAT NEED TO QUANTIFY THIS THREAT. WE NEED TO KNOW MORE ABOUT WHAT TYPE OF CONSEQUENCES TO EXPECT FROM THE DIFFERENT TYPES OF EVENTS AND ALSO WE NEED TO IDENTIFY THE STAKEHOLDERS THAT WILL SUSTAIN LOSS IN THE CASE OF AN EVENT. IN THIS STUDY WE AIM, THEREFORE, AT DEVELOPING METHODS TO ASSESS THE TOTAL RISK CAUSED BY EWES TO VARIOUS INFRASTRUCTURE OBJECTS (TRANSPORT AND BUILDING SECTOR) THAT CAN BE USED TO EVALUATE WHICH MITIGATION MEASURES CAN BE TAKEN IN ORDER TO EFFECTIVELY ADAPT TO EWES. WE WILL FOCUS ON THE ANALYSIS OF THE EXPOSURE AND VULNERABILITY OF INFRASTRUCTURE AND THE ASSESSMENT OF AVAILABLE MITIGATION MEASURES.	FRAUENFELDER	REGULA		STIFTELSEN NORGES GEOTEKNISKE INSTITUTT			01-05-10	31-12-13	RCN	NORWAY
215975	INDNOPOP	CLIMATE INDUCED MOBILIZATION OF PERSISTENT ORGANIC POLLUTANTS (POPS) IN RIVERS IN INDIA (INDNOPOP)		DATA REVEALS THAT MANY REGIONS OF INDIA ARE HOTSPOTS OF POP EXPOSURE. BEYOND THE PRESENCE OF ACTIVE PRIMARY SOURCES THE INDIAN ENVIRONMENT MAY BE SENSITIVE TO THE INFLUENCE OF RELEASES FROM ENVIRONMENTAL REPOSITORIES. POP OUTFLOW FROM GLACIER, FOR EXAMPLE, HAS BEEN POINTED OUT AS A RELEVANT SOURCE FOR FRESHWATER ECOSYSTEMS. ALTHOUGH IT IS ESPECTED THAT CLIMATE CHANGE HAVE AN EFFECT ON ENVIRONMENTAL EXPOSURE AND REMOBILIZATION OF DIFFUSE CHEMICAL POLLUTION FROM ENVIRONMENTAL REPOSITORIES (INCLUDING SOIL, VEGETATION AND GLACIERS), VERY LITTLE IS KNOWN ON THE MODALITY AND RELEVANCE OF THIS RELATIONSHIP. FURTHERMORE, LACK OF BASELINE STUDIES, HAMPERS A SOUNDING FORECASTING OF FUTURE REGIONAL EXPOSURE SCENARIOS UNDER CLIMATE CHANGE CONDITIONS.INDNOPOP WILL CONTRIBUTE TO FILL THESE GAPS BY DEVELOPING A RESEARCH IN A PARTICULARLY INFORMATIVE SCENARIO: THE GANGES RIVER CATCHMENT. IN AVERAGE 30 TO 40% OF THE GANGES WATERS DERIVE FROM GLACIER MELTING. MONSOON INPUTS AND WATER WITHDRAWAL FOR HUMAN USE REPRESENTS THE OTHER MAJOR DRIVERS CONTROLLING SEASONALITY OF THE GANGES HYDROLOGY. THE VARIABILITY EXPRESSED HERE ALONG THE SPATIAL AND	LARSSEN	THORJØRN FORSKNINGSLEDER		NORSK INSTITUTT FOR VANNFORSKNING			01-02-12	31-12-14	RCN	NORWAY

216064		TOO MUCH, TOO LESS, TOO BAD? - ADAPTING TO CLIMATE CHANGE IMPACTS ON WATER QUANTITY AND QUALITY IN THE DRYLANDS OF MAHARASHTRA, INDIA		MAHARASHTRA IS WITH AROUND 112 MILLION PEOPLE THE SECOND MOST POPULOUS STATE IN INDIA. MORE THAN 30 % OF THE STATE FALLS UNDER THE RAIN SHADOW AREA. IN THESE DRYLANDS PRECIPITATION CONCENTRATES TO MONSOON SEASON FROM JUNE UNTIL SEPTEMBER. WHILE MONSOON CAUSES FLOODS, THE REST OF THE YEAR CITIES AND VILLAGES, INDUSTRY AND FARMERS, AND THE ENVIRONMENT COMPETE FOR THE SAME SCARCE WATER AND WATER CONFLICTS ARISE. CHANGES IN WATER AVAILABILITY ALONG WITH INCREASE IN TEMPERATURE COULD E.G. HAVE PROFOUND EFFECT ON THE PRODUCTIVITY OF WATER;TECHNICAL ADAPTATION SOLUTIONS. THE PROJECT FOCUSES ON TWO CASE STUDY AREAS: PUNE AND SATARA DISTRICT, WHERE THE PROBLEMS WATER SCARCITY, RURAL-TECHNICAL ADAPTATION OPTIONS, WHICH WILL BE DISCUSSED WITH THE STAKEHOLDERS. THE STORAGE OF PROJECT RESULTS IN A GIS AND THE DEVELOPMENT OF A DECISION SUPPORT TOOL, WILL ALLOW THE STAKEHOLDERS TO BENEFIT FROM THE PROJECT BEYOND THE PROJECT PERIOD.	POSTE	AMANDA FORSKER		NORSK INSTITUTT FOR VANNFORSKNING			01-03-12	31-03-15	RCN	NORWAY
216546		THE RESPONSE OF THE HYDROLOGICAL SYSTEM IN INDIA TO CLIMATE CHANGE		THE CRYOSPHERIC CONTRIBUTION TO RIVERS IN WESTERN HIMALAYA PLAYS A SIGNIFICANT ROLE IN WATER RESOURCE AVAILABILITY. CHANGES IN CLIMATE IN THESE REGIONS LEAD TO A SIGNIFICANT IMPACT ON THE SOCIO; LIVELIHOOD AND PRODUCTION SYSTEMS AND LAND USE SYSTEMS AND WILL USE OUTPUT DATA FROM WORKPACKAGES 1 TO 3. PROJECT MANAGEMENT, ORGANISATION AND CO;ORDINATING THE DISSEMINATION OF PROJECT RESULTS. THE DISSEMINATION INCLUDES TWO WORKSHOPS FOR THE INDIAN AND NORWEGIAN PARTNERS FOR PRESENTATION OF PROJECT RESULTS. THIS SHOULD LEAD TO GREATER INCORPORATION OF THE RESULTS INTO LOCAL AND REGIONAL POLICY REGARDING WATER RESOURCES. PUBLICATION OF SCIENTIFIC RESULTS IN INTERNATIONAL SCIENTIFIC JOURNALS WILL BE GIVEN HIGH PRIORITY.	JACKSON	MIRIAM		NORGES VASSDRAGS-OG ENERGIDIREKTORAT (NVE)			15-08-12	14-08-15	RCN	NORWAY
216576		CLIMATE CHANGE AND ITS IMPACTS ON SELECTED INDIAN HYDROLOGICAL SYSTEMS USING EARTH SYSTEM AND HIGH-RESOLUTION MODELING		CLIMATE CHANGE, THOUGH GLOBAL IN NATURE, MAY AFFECT REGIONAL SCALES IN DIFFERENT WAYS. THE SEVERITY OF REGIONAL IMPACTS IS DEPENDENT ON THE AWARENESS AND PREPAREDNESS OF THE COUNTRY IN CONCERN. DUE TO ITS DIVERSIFIED SOCIO-ECONOMIC AND CLIMATIC CONDITIONS, INDIA IS PROMINENTLY VULNERABLE TO THE ENSUING CLIMATE CHANGE AND RELATED IMPACTS. THE REGULATION AND AVAILABILITY OF WATER SUPPLY OVER THE NORTH-INDIAN REGION DEPENDS ON BOTH SEASONAL AND PERENNIAL RIVERS. THE GLACIAL MELT REGIONS SURROUNDING HIMALAYAS ARE ALSO PRONE TO ABRUPT FLOODS AND RIVERINE CHANGES. THESE ARE, IN TURN, DEPENDENT ON THE MONSOON VARIABILITY THERE. GLOBAL CLIMATE CHANGE AND ITS IMPACT ON REGIONAL MONSOONAL VARIABILITY HAS BEEN A FOCAL CONCERN IN THE PAST YEARS. HOWEVER, KEY GAPS STILL EXIST IN THE REGIONAL MONSOON PREDICTION WITH APPROPRIATE REPRESENTATION. AN INTEGRATED ASSESSMENT OF CLIMATE CHANGE AND ITS IMPACT ON WATER RESOURCES NEEDS A HIERARCHICAL MODEL CONFIGURATION, WHICH INVOLVES THE REPRESENTATION OF GLOBAL AND REGIONAL PROCESSES WITH REASONABLE ACCURACY FOR THE PRESENT CLIMATE. THESE MODELS COULD THEN BE CONSIDERED APPROPRIATE TOOLS FOR FUTURE CLIMATE PROJECTIONS OVER A	MESQUITA	MICHEL GROUP LEADER		UNI RESEARCH AS			01-06-12	31-05-15	RCN	NORWAY
224779		EFFECTS OF CLIMATE CHANGE ON BOREAL LAKE ECOSYSTEMS: PRODUCTIVITY AND COMMUNITY RESPONSES		CLIMATE CHANGE IS EXPECTED TO AFFECT LAKE ECOSYSTEMS IN MANY WAYS. IN BOREAL SYSTEMS, CHANGES IN DISSOLVED ORGANIC MATTER AND NUTRIENTS WILL AFFECT LIGHT LEVELS, THERMAL REGIMES, PRODUCTIVITY AND COMMUNITY STRUCTURE. THIS PROJECT WILL ADDRESS THESE RESPONSES BY USE OF EXISTING DATABASES, REFINEMENT AND INTEGRATION OF EXISTING MODELS AND BY EXPERIMENTS AND FIELD STUDIES. THE MULTIDISCIPLINARY PROJECT GROUP WILL BUILD ON THE EXTENSIVE DATABASES ON LAKES AND BOREAL CATCHMENTS IN NORWAY, SWEDEN AND FINLAND COMBINED WITH PREDICTIVE STEADY-ORIENTED MODELS. THE GOAL IS TO ESTABLISH CAUSAL LINKS BETWEEN THE DRIVERS CLIMATE CHANGE AND N+S DEPOSITION AND CATCHMENT PROPERTIES ON EXPORT FLUXES OF DISSOLVED ORGANIC CARBON (DOC), AND THE KEY NUTRIENT ELEMENTS NITROGEN (N) AND PHOSPHORUS (P). PROJECTIONS WILL BE MADE DRIVEN BY VARIOUS SCENARIOS OF FUTURE CLIMATE CHANGE AND N+S DEPOSITION. THE WORK WILL BUILD ON STATISTICAL TOOLS, GIS-DEPOSITION. EFFECTS ON PHYTOPLANKTON CELL SIZE RELATED TO CHANGED TEMPERATURE AND NUTRIENTS. COMMUNITY EFFECTS FOCUSING ON SELECTED SPECIES SUSCEPTIBLE TO DOC AND TEMPERATURE.	HESSEN	DAG O. PROFESSOR		UNIVERSITETET I OSLO	BIOLOGISK INSTITUTT		01-04-13	31-03-16	RCN	NORWAY
225014		EFFECTS OF ENVIRONMENTAL CONDITIONS EXPERIENCED BY PARENTS, EMBRYOS AND JUVENILES ON LATER LIFE HISTORY STAGES IN ATLANTIC SALMON		BY USE OF TIME SERIES ANALYSIS AND LABORATORY EXPERIMENTS THIS PROJECT WILL ANALYSE EFFECTS OF CLIMATE AND HABITAT LOSS OF THE PRODUCTION OF ATLANTIC SALMON IN A NORWEGIAN INDEX RIVER. SPECIFICALLY WE WILL: 1) STUDY EFFECTS OF CLIMATE AT DIFFERENT TIMES OF THE YEAR AND LOSS OF LAKE HABITAT ON JUVENILE SALMON PRODUCTION IN THE RIVER IMSA. WE WILL DO THIS BY TESTING EFFECTS OF NUMBERS OF EGGS SPAWNED, WATER TEMPERATURE AND FLOW ON RECRUITMENT, GROWTH AND JUVENILE PRODUCTION. FISH MIGRATION AND ENVIRONMENTAL VARIABLES IN THE RIVER HAVE BEEN MONITORED DAILY DURING 37 YEARS. 2) WORK OUT PREDICTIONS FOR FUTURE CHANGES IN SALMON PRODUCTION IN THE IMSA (2071;HISTORY VARIATION DUE TO CLIMATE CHANGE TRANSLATES TO POPULATION DYNAMICS, SPECIFICALLY HOW IT AFFECTS THE POPULATION GROWTH RATE (R). THERE IS GOOD GENDER BALANCE IN THE PROJECT, AND THE RESULTS WILL BE DISSEMINATED IN REPORTS, PEER REVIEWED SCIENTIFIC JOURNALS AND POPULAR SCIENCE JOURNALS AND DIRECTLY TO NATURE MANAGERS.	JONSSON	NINA SENIORFORSKER		STIFTELSEN NORSK INSTITUTT FOR NATURFORSKNING NINA			01-01-13	31-12-15	RCN	NORWAY

227024	FREMONEC	FREMONEC: EFFECT OF CLIMATE CHANGE AND RELATED STRESSORS ON FRESH AND BRACKISH WATER ECOSYSTEMS IN SVALBARD		THE RUSSIAN-NORWEGIAN COLLABORATION PROJECT FREMONEC AIMS TO STRENGTHEN THE COOPERATION BETWEEN NORWAY AND RUSSIA ON POLAR RESEARCH IN SVALBARD. IT WILL SERVE AS A POSITIVE EXAMPLE FOR A NETWORK BUILDING IN THEMATIC AREAS RELEVANT FOR BOTH COUNTRIES: IMPACTS OF CLIMATE CHANGE, BIODIVERSITY AND ECOLOGY. RESEARCHERS FROM THE NORWEGIAN INSTITUTE FOR NATURE RESEARCH AND M. V. LOMONOSOV MOSCOW STATE UNIVERSITY WILL STUDY THE EFFECTS OF CLIMATE CHANGE AND RELATED STRESSORS ON FRESH AND BRACKISH WATER HABITATS, BY USING INVERTEBRATES AS BIOLOGICAL QUALITY ELEMENTS. THE COOPERATION INCLUDES ALSO REPRESENTATIVE FROM UNIS. THE FIELD WORK WILL FOCUS ON FRESH AND BRACKISH WATER ECOSYSTEMS THAT SO FAR ARE COMPARATIVELY LITTLE STUDIED. BOTH NORWEGIAN AND RUSSIAN SCIENTISTS WILL BE INVOLVED IN THE STUDY DESIGN AS WELL AS IN A MEETING, FIELDWORK IN 2014 AND 2015 IN SVALBARD, ANALYSIS OF COLLECTED MATERIAL AND FINAL REPORTING. AS A RESULT A DATABASE ON PREVIOUS AND CURRENT STUDIES WILL BE DEVELOPED AND CAN BE USED FOR NEW JOINT PROJECTS. NETWORK-BUILDING BETWEEN BOTH RESEARCH GROUPS WILL BE IMPLEMENTED THROUGH COMMON FIELD- AND LABORATORY WORK. THE MATERIAL OBTAINED WITHIN THIS PROJECT WILL	WALSENG	BJØRN		STIFTELSEN NORSK INSTITUTT FOR NATURFORSKNING NINA	NORSK INSTITUTT FOR NATURFORSKNING	AVDELING OSLO	10-06-13	28-12-15	RCN	NORWAY
227044	CharrAdapt	CHARRADAPT: ADAPTATION OF ARCTIC CHARR TO CHANGING POLAR CLIMATE		THE CHARRADAPT PROJECT PROPOSES TO INVESTIGATE THE ADAPTATION OF ARCTIC CHARR (SALVELINUS ALPINUS), TO THE EXTREME POLAR ENVIRONMENT THROUGH THE STUDY OF POPULATION BIOLOGY, PHYSIOLOGY AND GENETICS. AS THE ONLY ARCTIC POLAR FRESHWATER FISH SPECIES, ARCTIC CHARR SERVE AS AN IMPORTANT MODEL IN WHICH TO INVESTIGATE ADAPTATION TO EXTREME ENVIRONMENTS, A CRUCIAL NEED UNDER CURRENT CHANGING CLIMATIC CONDITIONS.TO ACHIEVE THIS GOAL, A COLLABORATION BETWEEN THE NORWEGIAN INSTITUTE FOR WATER RESEARCH (NIVA), OREGON STATE UNIVERSITY (OSU) AND AKVAPLAN;ÅLESUND WILL BE USED DURING THE FIELD PHASE OF THE PROJECT.	ROSTEN	CAROLYN		NORSK INSTITUTT FOR VANNFORSKNING			01-03-13	29-02-16	RCN	NORWAY
177893	EnviDORR	INCREASED POWER AND SALMON PRODUCTION WITH ENVIRONMENTALLY DESIGNED OPERATION OF REGULATED RIVERS		HYDROPOWER IS A VERY EFFICIENT SOURCE OF ENERGY, HOWEVER THERE WILL ALWAYS BE QUESTIONS RELATED TO THE EFFECT IT HAS ON THE FAUNA IN THE RIVERS. IN ENVIDORR SALMON SCIENTISTS, HYDROLOGISTS, HYDROPOWER ENGINEERS, INDUSTRY AND MANAGEMENT JOIN FORCES TO DEVELOP OPTIMAL SOLUTIONS TO INCREASE BOTH SALMON AND HYDROPOWER PRODUCTION IN REGULATED RIVERS. THE MAIN FOCUS FOR MITIGATION IN REGULATED RIVERS USED TO BE TO MIMIC NATURAL FLOW CONDITIONS. ENVIDORR FOCUSES ON ENHANCING POSITIVE AND REDUCING NEGATIVE EFFECTS OF RIVER REGULATION, WHILE MAINTAINING OR INCREASING THE POWER PRODUCTION. TO DESIGN OPTIMAL SOLUTIONS, IT IS VITAL TO EXPAND OUR KNOWLEDGE ON THE EFFECTS OF ENVIRONMENTAL VARIABLES ON THE DIFFERENT LIFE STAGES OF SALMON. METHODS FOR RESTORATION AND IMPROVEMENT OF HABITAT CONDITIONS WITHOUT LOSS OF POWER PRODUCTION HAVE BEEN USED IN A FEW NORWEGIAN RIVERS. MODELS SHOW THAT ADAPTIVE HYDROPOWER OPERATION WILL ENSURE SUCCESSFUL SPAWNING, EGG (PREVENTING DEWATERING) AND JUVENILE SURVIVAL (RESIDUAL FLOW PATTERNS). WE ARE ALSO DEVELOPING STRATEGIES TO PREVENT TURBINE SMOLT MORTALITY, AND IN THE RIVER MANDALSELVA STROBE LIGHTS AND OPTIMAL DIVERSION OF WATER IN THE BYPASS SECTION HAS INCREASED SMOLT SURVIVAL FROM 10 % IN 2003 TO 64 % IN 2008. UPSTREAM MIGRATION SOLUTIONS ARE ALSO A MAJOR TASK IN THE PROJECT. ENVIDORR WILL: • COLLATE THE BEST RESEARCH GROUPS ON SALMONID ECOLOGY, HYDROLOGY AND HYDROPOWER OPERATION MODELS • EXPLOIT EXISTING DATA SERIES AND MODELS, AND DEVELOP NEW MODELS TO ALLOW COMPARISON OF DIFFERENT DESIGN SOLUTIONS	FORSETH	TORBJØRN		STIFTELSEN NORSK INSTITUTT FOR NATURFORSKNING NINA			01-01-07	31-12-12	RCN	NORWAY
175655	TECHNEAU	TECHNOLOGY ENABLED UNIVERSAL ACCESS TO SAFE WATER		IT IS THE VISION OF TECHNEAU THAT, IN ORDER TO COPE WITH PRESENT AND FUTURE CHALLENGES, WATER SUPPLY SYSTEMS SHOULD CONSIDER A TRANSFORMATION FROM MONO-SCALE TO FLEXIBLE MULTI-SCALE SYSTEMS I.E. INTERLINKED CENTRALISED AND DECENTRALISED SATELLITE TREATMENT, MONITORING AND CONTROL SYSTEMS. TECHNEAU WILL DEVELOP AND DEMONSTRATE ADAPTIVE SUPPLY SYSTEM OPTIONS AND NEW AND IMPROVED SUPPLY AND MONITORING TECHNOLOGIES AND MANAGEMENT PRACTICES. TREATMENT STRATEGIES WILL BE BASED ON ROBUST MULTI-BARRIER SCHEMES AND CONTROL METHODOLOGIES, PROVIDING SAFETY AGAINST A BROAD SPECTRUM OF CHEMICAL AND MICROBIOLOGICAL CONTAMINANTS AND AVOIDING ORGANOLEPTIC PROBLEMS AT THE TAP. MONITORING TECHNOLOGIES WILL PROVIDE ON-LINE AND AT THE SITE INFORMATION ON WATER QUALITY INCLUDING PARAMETERS THAT RELATE TO MALICIOUS CONTAMINATION. PRACTICES FOR RISK ASSESSMENT/RISK MANAGEMENT, OPERATION AND MAINTENANCE, AND MODELS FOR CONSUMER ACCEPTANCE WILL CONSTITUTE THE FRAMEWORK FOR THESE TECHNOLOGIES. THESE TECHNOLOGIES AND MANAGEMENT PRACTICES WILL ENABLE END-USERS TO MAKE INFORMED CHOICES, APPROPRIATE TO THEIR OWN CIRCUMSTANCES AND CONSTRAINTS, FOR	RØSTUM	JON FORSKER		STIFTELSEN SINTEF			10-01-06	31-12-13	RCN	NORWAY

194486	PYROWATER	WILDFIRE EFFECTS ON BIOGEOCHEMISTRY OF SOIL AND SURFACE WATER		KNOWLEDGE ON AQUATIC EFFECTS OF WILDFIRE IS IMPORTANT, BECAUSE LITTLE DATA EXIST AND INCREASED FREQUENCY OF WILDFIRE IS EXPECTED AS A CONSEQUENCE OF CLIMATE CHANGE. PYROWATER WILL FOCUSING ON MAJOR CHEMICAL AND BIOLOGICAL EFFECTS OF WILDFIRE IN AQUATIC ECOSYSTEMS. 3 CATCHMENT AFFECTED BY WILDFIRE, 3 AFFECTED BY BOTH WILDFIRE AND SALVAGE LOGGING, AND 3 CONTROL CATCHMENTS WILL BE INCORPRATED. THE FIELD WORK WILL BE CONDUCTED IN THE LARGE WILDFIRED AREA IN FROLAND, AUST-VARIATIONS IN STABLE SULPHURE ISOTOPE RATIO (D34S) IN PRECIPITATION, SOIL- QUALITATIVE AND QUANTITATIVE CHANGES IN PHYTO- EVALUATE THE MIRNA TECHNIQUE AS A NEW TOOL TO REVEAL INTERNAL BIOLOGICAL/GENETIC RESPONSE MECHANISMS RELATED TO SPECIFIC ENVIRONMENTAL PRESSURES, AS ACID, AL RICH WATER. A PILOTSTUDY WILL BE IMPLEMENTED ON BROWN TROUT UNDER LABORATORY CONDITIONS. IF SUCCESS, SIMILAR ANALYSES WILL BE PERFORMED ON WILD FISH FROM THE FIRED AREA TELEMARK UNIVERSITY COLLEGE WILL LEAD THE PROJECT AND 3 NORWEGIAN UNIVERSITIES AND 2 RESEARCH INSTITUTES WILL PARTICIPATE.	LYDERSEN	ESPEN PROFESSOR		HØGSKOLEN I TELEMARK	FAKULTET FOR ALLMENNVITEN SKAPELIGE FAG		01-10-09	01-01-13	RCN	NORWAY
208418		DIRECT AND INDIRECT CLIMATE FORCING OF ECOLOGICAL PROCESSES: INTEGRATED SCENARIOS ACROSS FRESHWATER AND TERRESTRIAL ECOSYSTEMS		THE CLIMATIC VARIABLES, TEMPERATURE AND PRECIPITATION, ARE IN INTERACTION WITH HERBIVORY AND LAND USE, MAJOR DRIVERS OF TERRESTRIAL VEGETATION DYNAMIC. VEGETATION PATTERNS ARE AGAIN, MAJOR DRIVERS OF RUN-OFF PATTERNS AND NUTRIENT AND CARBON FLUXES, WHICH HAVE PERVASIVE EFFECTS ON AQUATIC PRODUCTION AND BIODIVERSITY. BOTH ENERGY AND MATTER ARE TRANSPORTED ACROSS ECOSYSTEM BOUNDARIES. THUS, ECOSYSTEMS DO NOT RESPOND INDEPENDENTLY OF EACH OTHER TO CLIMATE CHANGE. THIS PROJECT WILL ANALYZE POPULATION AND ECOSYSTEM EFFECTS OF CLIMATE CHANGE. WE WILL CONSTRUCT LOCAL AND NATIONAL CLIMATE EFFECT SCENARIOS BY INTEGRATING FORECAST OF CLIMATE AND LAND-USE DRIVEN VEGETATION STRUCTURE WITH RUN-OFF, AQUATIC PRODUCTION AND BIODIVERSITY. IN ORDER TO MODEL LARGE SCALE CLIMATE EFFECTS ON TERRESTRIAL VEGETATION AND TO LINK THIS TO FRESHWATER ECOSYSTEMS, FIELD OBSERVATIONS AT VARIOUS TEMPORAL AND SPATIAL SCALES NEEDS TO BE COMBINED WITH REMOTE SENSING DATA, EXISTING DIGITAL MAPS, AND RUN-OFF MODELS. THE PROJECT INVOLVES SEVERAL TIGHTLY INTEGRATED WORK PACKAGES INVOLVING VARIOUS TYPES OF TIME-SERIES AND SPATIAL ANALYSES AND GIS TOOLS. THIS WILL BE MERGED WITH HYDROLOGICAL MODELS, AND	JONSSON	BROR FORSKNINGSSJE F		STIFTELSEN NORSK INSTITUTT FOR NATURFORSKNI NG NINA			01-06-11	31-12-15	RCN	NORWAY
208421		GENETIC TOOLS FOR BIODIVERSITY MONITORING IN AQUATIC ECOSYSTEMS		RESEARCH ON BIODIVERSITY, ITS IMPACT ON ECOSYSTEM FUNCTIONING, HOW IT IS DISTRIBUTED GEOGRAPHICALLY, AND WHICH FACTORS ARE IMPORTANT IN MAINTAINING IT ARE AMONG THE MAIN ISSUES IN ECOLOGY WORLDWIDE. BIODIVERSITY MONITORING IS AN ISSUE IN ITS OWN RIGHT, BUT EQUALLY IMPORTANT IS THAT MANY ORGANISM GROUPS ARE EXTENSIVELY USED FOR MONITORING EFFECTS OF POLLUTION, HABITAT DEGRADATION, OR CLIMATE CHANGE, INCLUDING MONITORING ACCORDING TO THE WATER FRAMEWORK DIRECTIVE. MANY MONITORING METHODS DEPEND ON DETECTING THE PRESENCE OR ABUNDANCE OF SPECIES. THE BIOLOGICAL COMPONENTS OF THESE MONITORING PROGRAMS ARE GENERALLY AMONG THE MOST TIME-CONSUMING AND EXPENSIVE PARTS. AT THE SAME TIME, DETERMINATION TO SPECIES LEVEL IS OFTEN PRACTICALLY IMPOSSIBLE DUE TO THE PRESENCE OF CRYPTIC SPECIES, THE PRESENCE OF IMMATURE INDIVIDUALS WHICH OFTEN CANNOT BE IDENTIFIED TO SPECIES LEVEL, LACK OF UNIQUE MORPHOLOGICAL TRAITS IN VERY SMALL SPECIES, OR SIMPLY THE LOSS OF CLASSICAL TAXONOMIC KNOWLEDGE AMONG ECOLOGISTS. IN THE PRESENT STRATEGIC INSTITUTE INITIATIVE (SIS), WE AIM TO COPE WITH THE DRAWBACKS NAMED ABOVE BY DEVELOPING AND IMPLEMENTING GENETIC MARKERS AS ROUTINE TOOLS FOR MONITORING	REFSETH	UNN HILDE		NORSK INSTITUTT FOR VANNFORSKNI NG			01-01-11	31-12-14	RCN	NORWAY
208430		NIVA'S STRATEGIC RESEARCH INITIATIVE (SIS) ON EMERGING ENVIRONMENTAL CONTAMINANTS		NEW CHEMICALS ARE CONTINUALLY BEING DEVELOPED AND RELEASED INTO THE ENVIRONMENT. THEIR OCCURRENCE MAY HAVE FAR-REACHING IMPLICATIONS FOR ENVIRONMENTAL QUALITY AND HUMAN HEALTH. INCREASING ATTENTION FROM THE ENVIRONMENTAL AUTHORITIES ON HOW TO TACKLE THE INCREASINGLY COMPLEX CONTAMINANT SITUATION REQUIRES NEW VIEWS AND NEW METHODS IN OUR 'TOOLBOX'. THE CHALLENGES ARE MANY SINCE AT PRESENT WE USE VERY SIMPLE TOOLS TO TRY AND SOLVE A VERY COMPLEX PROBLEM. TRADITIONAL COGNITIVE AND REGULATORY APPROACHES MAYNOT BE ADEQUATE OR SUFFICIENT TO FACE FUTURE CHALLENGES POSED BY THESE CHEMICALS. THIS SIS FOCUSES ON EMERGING CONTAMINANTS AND THE ISSUES ASSOCIATED WITH THEM. NIVA'S RESEARCH ON ENVIRONMENTAL CONTAMINANTS COVERS A WIDE RANGE OF DISCIPLINES AND IT IS OF FUNDAMENTAL IMPORTANCE FOR STRATEGIC DEVELOPMENT THAT THIS INTERDISCIPLINARY EXPERTISE IS UTILIZED. STRENGTHENING THE LINKS BETWEEN DISCIPLINES USING DIFFERENT METHODOLOGICAL APPROACHES, E.G. LABORATORY BASED TESTS, FIELD WORK, MONITORING AND MODELLING IS ANTICIPATED. THE SIS WILL BE ORGANIZED IN FOUR CROSS-CUTTING AND INTEGRATED THEMES, COVERING MAJOR RESEARCH NEEDS REGARDING	LARSSEN	THORJØRN FORSKNINGSLE DER		NORSK INSTITUTT FOR VANNFORSKNI NG			01-01-11	31-12-15	RCN	NORWAY

212135		HUMAN IMPACTS IN COASTAL ECOSYSTEMS -EFFECTS ON ECOSYSTEM STRUCTURE AND FUNCTION		COASTAL ECOSYSTEMS ARE UNDER INCREASING PRESSURE FROM HUMAN DRIVERS, INCLUDING CLIMATE CHANGE, HARVESTING, INVASIVE SPECIES AND HABITAT DISTURBANCE. IN THIS PROJECT, WE WILL INVESTIGATE HOW THE STRUCTURE AND FUNCTION OF COASTAL ECOSYSTEMS IN NORWAY ARE AFFECTED BY SPECIFIC HUMAN DRIVERS. THE PROJECT IS ORGANIZED IN FOUR WORK PACKAGES (WPS) THAT ADHERE TO ONE OF TWO THEMES. EACH WP CONSISTS OF A MULTI-DISCIPLINARY TEAM THAT WILL INVESTIGATE THE EFFECT OF SPECIFIED HUMAN DRIVERS ON IMPORTANT PARTS OF THE ECOSYSTEM. IN THE FIRST THEME, WE WILL INVESTIGATE THE EFFECT OF HABITAT CHANGE ON BIODIVERSITY AND ECOSYSTEM FUNCTIONING. FISH FARMING AND BOTTOM TRAWLING ARE HUMAN ACTIVITIES WITH PRESUMED LARGE IMPACTS ON NORWEGIAN COASTAL HABITATS. USING A BACI APPROACH, WP 1 WILL INVESTIGATE THE EFFECT OF FISH FARMING ON WILD FISH COMMUNITIES. BASED ON EXISTING LARGE SCALE DATA ON BOTTOM TRAWLING AND BENTHIC BIODIVERSITY, WP2 WILL STUDY THE EFFECT OF TRAWLING ON THE FUNCTIONAL DIVERSITY OF BENTHIC COMMUNITIES. IN THE SECOND THEME, WE WILL INVESTIGATE HOW CLIMATE CHANGE AND HARVESTING AFFECT TROPHIC INTERACTIONS AND THE SPATIAL STRUCTURE OF THE ECOSYSTEM. CLIMATE	FAUCHALD	PER SENIORFORSKER		STIFTELSEN NORSK INSTITUTT FOR NATURFORSKNING NINA			01-01-12	31-12-15	RCN	NORWAY