

YESTERDAY MORNING SOIL BIOSPHERE



A musical project for our planet

In collaboration with
Unesco Creative Cities Network
Norrköping



Roman Reznik



Camerata Ostrogothia



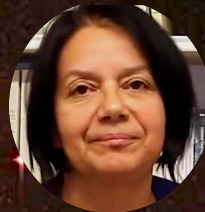
Delphine Constantin-
Reznik



Patrick Chartol



leif.e.boman



Diana Ruiz Pino

GÅRDAGENS MORGON (Yesterday Morning) SOIL II BIOSPHERE

MUSIKALISKT PROJEKT DÄR ALLA VÄRLDENS 202 LÄNDER MEDVERKAR

Utarbetat av musiker, orkester, konstnärer och
en oceanograf och nobelpristagare.

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Samarbete med UNESCO Creative Cities Network
Norrköping

Projektet Gårdagens Morgon "SOIL" är ett gränsöverskridande projekt där alla Världens 202 länder medverkar och skapar en helhet samt reflekterar på vår samtid och vår egen roll i den.

Kultur är jord.
&

Naturens element, biosfären, haven, luften förenar oss.

Grundidén är att förena alla Världens 202 länder och kulturer i ett musikaliskt projekt baserat på alla 202 medverkande länder med den biosfär som omger oss. En idé som håller folkgrupper tillsammans. Människogrupper och folkgrupper som har levt tillsammans under en längre tid har ofta skapat en egen typ av kultur tillsammans. Det innebär bland annat sättet man talar på med varandra i sida av det språk man har inom kulturen. Det innefattar även religion och kulturella seder och traditioner.

Kultur innebär ofta sättet som människor lever på tillsammans och det skiljer sig väldigt mycket mellan olika länder. I grund och botten så är det viktigt för människor att även få chansen att uppleva andra människors kulturer, för att växa som människa och se sin egen roll i den och synen på hur Vi tar hand om vår gemensamma planet ur ett större perspektiv.

Här presenterar Vi ett konstnärligt projekt som har pågått med sin början 1993.

"GÅRDAGENS MORGON SOIL"

Uppmanar till

Insikt, Gemenskap och försoning.

"GÅRDAGENS MORGON SOIL II BIOSPHERE" är en unik kombination av musik, konst, vision och vetenskap.

Syftet med projektet är att uppmärksamma de olika aspekterna av vårt samhälle och de utmaningar vi står inför, inklusive klimatet, som spelar en nyckelroll för vår överlevnad på vår gemensamma planet.

Vi tror att samarbete mellan olika områden, såsom konst och vetenskap, kommer att sammanföra människor från hela världen för att hitta de bästa möjliga lösningarna på det problem vi står inför på vår planet.

Denna unika musik i detta projekt i kombination med visuella effekter kommer att ge en mycket tydlig och djup bild av vår biosfär och jordmån och mycket mer utöver det.

Syftet med detta projekt är att beröra de djupaste frågorna om människans existens och framtida utveckling.

Naturen och den biologiska mångfalden har alltid inspirerat musiken, kopplar samman kulturell och biologisk mångfald, dessutom är musiker och konstnärer förebilder och talesmän för miljontals människor över hela världen och kan påverka sina publiks beslut och åsikter både på och på scenen. Jordprojektet är ett unikt musikprojekt inspirerat av Jordens naturresurser syftar till att utnyttja musikens kraft för att tjäna bevarandet av biologisk mångfald i syfte att bidra till människors välbefinnande.

Det är också möjligt att använda analysresultatet för att visuellt visa ländernas unika färgegenskaper i videoform. etc

För att uppleva deras verkliga inverkan, sätt på dig några hörlurar och kolla in och lyssna på jordens "röst". Efter att ha lyssnat inser du att ljuden konstruerades från en jord som skriker att höras, en jord som ber om hjälp för att rädda vår planet från den nuvarande klimatkrisen. Jorden från alla 202 länder ber om hjälp. Jag kan garantera att du kommer att fångas i tankar som du annars aldrig skulle ha tänkt på.

Naturens element tystnar eller glömmar aldrig.

*Det har sagts av någon "där orden tar slut tar musiken
vid"
Finns det ett meddelande måste man först hitta ett sätt att
höra det;
först därefter kan
tolkningsförsöken ta sin början.*

En av nyckelkomponenterna i projektet *"BIOSPHERE SOIL II" GÅRDAGENS MORGON* och en av de mest intressanta att fördjupas i, är utvecklingen av ljudlandskapet. För någon år sedan, i ett land långt, långt borta (OK, det är Sverige..., men du vet vad jag menar), den berömda ljud- och bildkonstnären leif .e. boman råkade ut för en upptäckt som har berikat och förvånat hundratusentals människor från hela världen. Till och med inklusive UNESCO och UNICEF.

<https://unesco.se/konstnaren-leif-e-boman-ger-jord-en-talan-i-projektet-soil/>

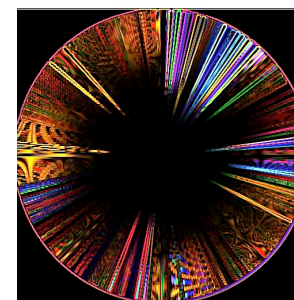
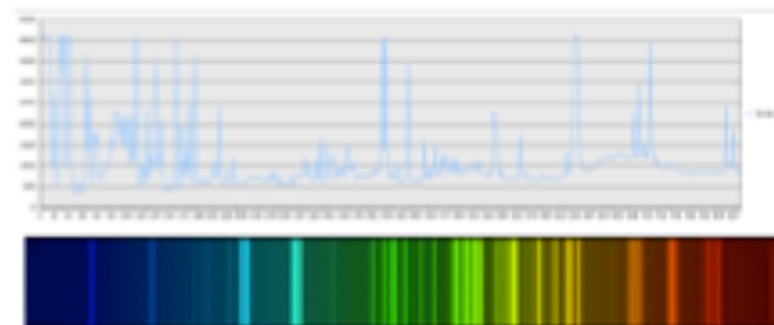
I samarbete med FN:s miljöprogram och ambassaderna i varje medlemsland kommer hans egenutvecklade ljudkompositioner, "Earth Sounds", från naturens element och mineraler. Med hjälp av emissionsspektroskopi anpassar boman ljusets vågformer till ljudfrekvenser av jord, biosfären, vulkanisk aska, betongdamm, vatten, mikrober, månstenar etc. ger boman en röst till alla 202 länder, hav, öknar, berg, stadslandskap, miljöer av stor skönhet och platser av förödelse och utsägligt lidande.

Eftersom mineralsammansättningen i jorden skiljer sig mycket beroende på platsen, gör även de resulterande ljuden. Konstnären har samlat jordprover från 202 länder, inklusive alla 193 FN-länder och 4 territorier. Han har gjort analyser och omvandlat våglängderna till hörbara ljud av dem alla. Jordljuden 'lagras' som digitala ljudbytes – vilket innebär att de kan användas som ljudkällor för moderna elektroniska musikinstrument som samplers, modular synthesizers, sequencers, etc.

Det betyder att nu för första gången kommer en filmisk ljuddesign att få en relevans som aldrig tidigare har upplevts. Så mycket att ljuden i sig förankrar en viktig aspekt av handlingen. Och med en ljudeffekt som bokstavligen kan skaka en byggnad till dess grund, är sammansmältningen av traditionella musikkompositioner och bomans "Earth Sounds" i slutändan hisnande.

Mark Warford

https://en.wikipedia.org/wiki/Mark_Warford



Färgspektra från alla 202
Länders jordar

BIOSFÄREN Kan ha olika men liknande betydelser. Termen kan syfta på massan av alla levande organismer i litosfären, hydrosfären och atmosfären. Biosfären kan också hänvisa till summan av alla jordens ekosystem - det tunna skiktet som finns runt om i världen som hyser biologiskt liv. (det biologiska mångfalden). Ozonskiktet, jordens hav och syreproducerande växter är några av komponenterna även i biosfären.

Projektet inkluderas ljud som invävs i symfonin utifrån:

Alla 202 *länders jordprover* jordarna är insamlade sedan 1993 med hjälp av UNESCO, International Commission for Unesco, SIDA, Utländska Ambassader i Stockholm, Köpenhamn, Oslo, Svenska ambassader utomlands och konst / musiker kollegor. Alla ländernas jordar är analyserade med hjälp av forskare på Linköpings universitet. Analysresultaten har med matematisk beräkning omvandlats till hörbara frekvenser som vidare processas med samplers och modular synthesizers etc. Ljudkompositionerna som ingår i symfonin är basen för symfonin.

Meteoritfynd i Marocko Sahara.

En meteorit funnen i Marocko Sahara öken är analyserad av prof. i geologi och expert på meteoriter *Hasnaa Chennaoui Aoudjehane Université Hassan II Casablanca* och resultat och meteorit är överlämnat till Leif.

Mikrober Prof. *Mark Nielsen* på *Oregon Universitet*. Hans uppmärksammade projekt att påvisa att mikrober i havsbotten 900 m. djupt i Monterey Bay i Kalifornien kan allstra elektrisk aktivitet. Hans analysmaterial och *sediment* från projektplatsen 900 meter djupt i Monterey Bay i Kalifornien är analyserat tillsammans med forskare på Linköpings universitet.

Odlade mikrober i alla 202 länders jordar

Alla de 202 ländernas jordprover är sedan 2007 utblandade med vatten och mikroberna har blivit matade med för mikrobernas nödvändiga näringsämnen. Jordsjörjan med mikrober har video filmats och kan påvisa en ökning av mikrobernas tillväxt. Sjörjan är analyserad och dess resultat har med matematisk beräkning omvandlats till hörbara frekvenser som i sin tur bearbetas och deras ljud ingår i projektet.

Projektet kommer även att inkludera andra ljud baserat på resultat från analyser, samt analys av atmosfären (elektromagnetiska ljud). och *koldioxiden* i havet och luften, *Sediment* från

Weddell Sea *Antarktis*. Ett samarbete sedan 2017 med Oceanograf expert och Nobelpristagaren *Diana Ruiz Pino* och hennes lab på *Sorbonne Universitet* i Paris. Projektet har även tillgång till hennes galleri och research och workshops plats i La Traverse i Paris.

Projektet skall resultera i ett symfoniskt verk i 7 satser baserade på alla världens 202 länders unika jordljud tillsammans med ljud utifrån biosfären som omger oss tillika mikrober från haven etc. Antarktisk jord som varit instängd miljontals år i ett isblock. allt vävs in i symfonin. Alla medverkande ljud framföres live.

Symfonin är komponerat av Patrick Chartol i samarbete med Delphine Constantin Reznik och Roman Reznik leif.e.boman

Symfonin är för komplett symfoniorkester med en längd av 45 minuter.

Vid framförandet visas ett integrerat videoverk av videokonstnären Patrick Chartol video som baseras sig på ländernas jordars unika färgspektra.

År 2010 blev leif inbjuden av UNESCO att tillsammans med musiker och sir Niels Lan Doky utforma ett musikprojektet för UNESCO's biologiska mångfalds år 2010, framförandet gjordes på Muséum National d'histoire Naturelle.

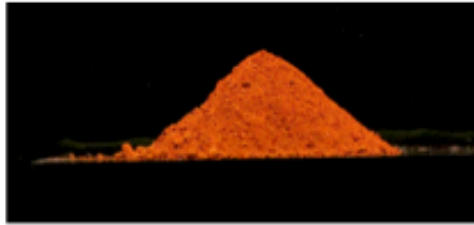
Vilket är ett led i detta projekt. Museomet ingår som samarbetspartner med Diana Ruiz Pino och nedanstående organisationer som bistår med analysmaterial som omvandlas till hörbarhet.

Ett särskilt Tack till Oceanografen och Nobelpristagaren Diana Ruiz Pino

Som tillhandahåller sin kunskap och de analysmaterial för de ideér som projektet vill framföra.



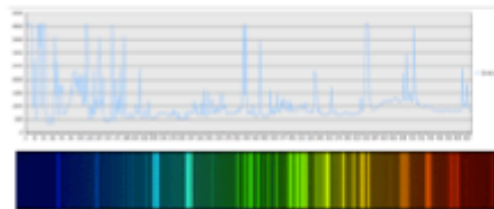
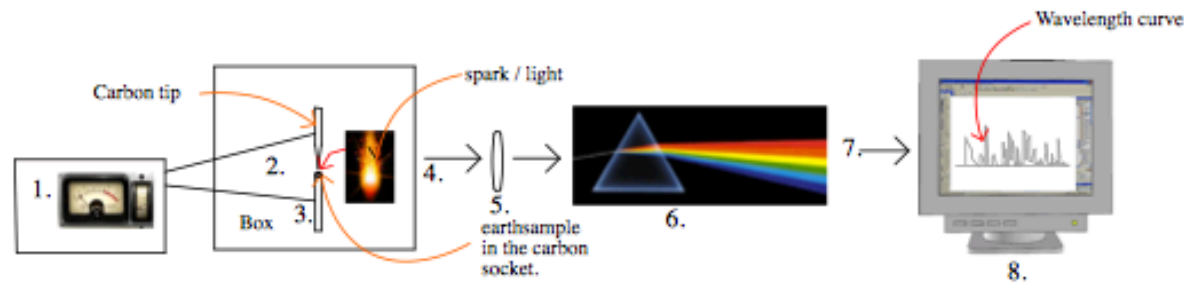
Technical illustration information. Emmissionspectroscopy



Earth sample.



Emmissionspectroscopy at the Linköpings university.



Wavelength Curve and its color spectrum.

1. Electricity
2. Spark.
3. Carbon rod / socket
4. spark light is carried out through a glaswindow and captured by the lens and the light is passed on to the prism.
5. Lens.
6. Prism gives colour spectrum.
7. Spectrum /Wavelenght.
8. Computer that registers the soils unique wavelenght which converts to audible frequencies.



Clip rom the video showing a part of the earths colour spectrum.

Av jord är ljud kommet.

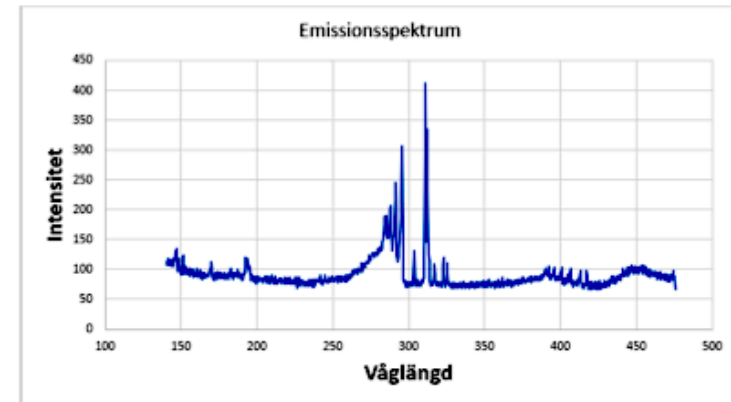
leif.e.boman har i sitt arbete med **jordljud** används sig av jordprov från olika delar av världen och med hjälp av **emmissionspektroskopi** fått ett fingeravtryck av markprovet. Detta spektrum visar jordens sammansättning på atom-och molekylnivå uttryckt i siffror, ett slags ”jordens digitala själ” .

En av mina roller i samarbetet med leif är att **transformera** denna digitala själ till små ljudklipp kan sedan vidare tolkas och processas av leif i samplers, synthesizers samt datorer.

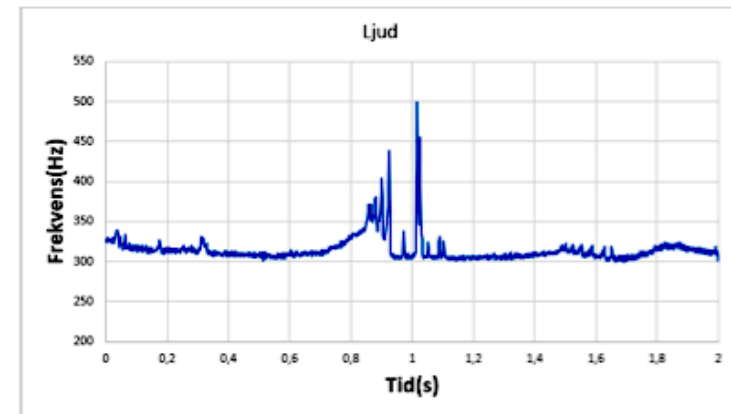
Transformeringen har gjorts i **Python** och **Numpy**.

Transformeringen kan beskrivas med att våglängden i emmissionspektret avbildas på tidsaxeln för ljudet och intensiteten i emmissionspektret avbildas på ljudets frekvens. På det här sättet skapas ljudfiler med korta ”kvittrande” ljud från jorden.

I exemplet nedan har intensiteten avbildats på frekvensområdet 300-500 Hz och våglängden avbildats på tiden 0-2 s.



$$f = 200 * \frac{I(\lambda) - I_{min}}{I_{max} - I_{min}} + 300, \quad t = 2 * \frac{(\lambda - \lambda_{min})}{(\lambda_{max} - \lambda_{min})}$$



The microbes has been feeding since 2005
It's microbes in a mix of all 202 countries earth samples
together with mud Clay from the seabed 960 depth in
Monterey bay in California
The data and analys is used for colorspectra and sound
etc.



Fed microbes in soil from 200 countries, since 2005.

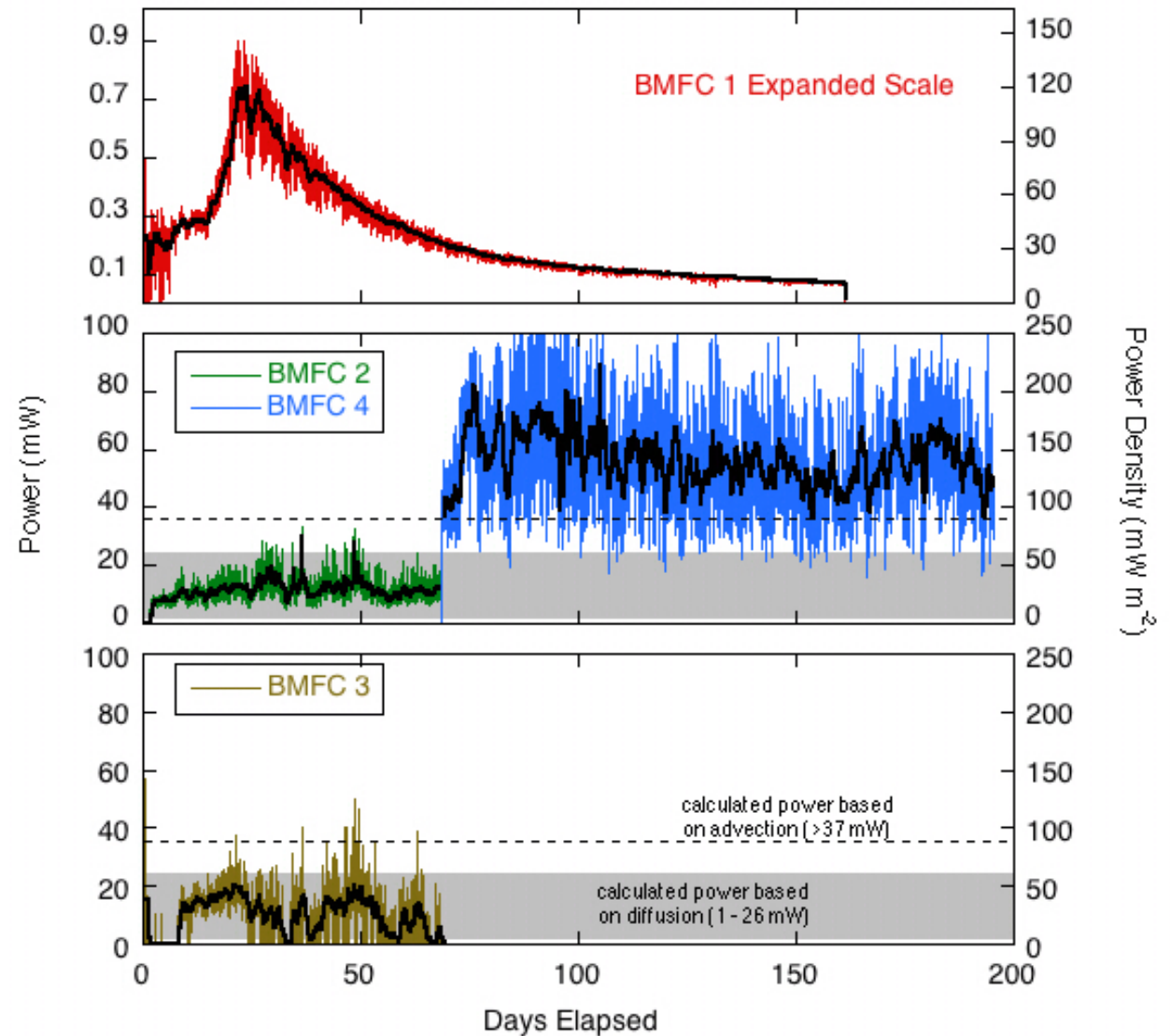
Data with microbes electricitet.

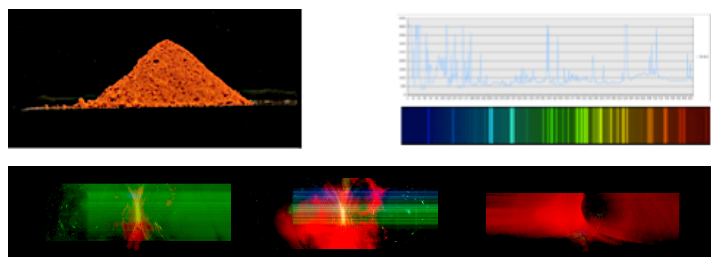
A project by Scientist Mark Nielsen at Oregon Universitet.

He have find that microbes producce electricitet.

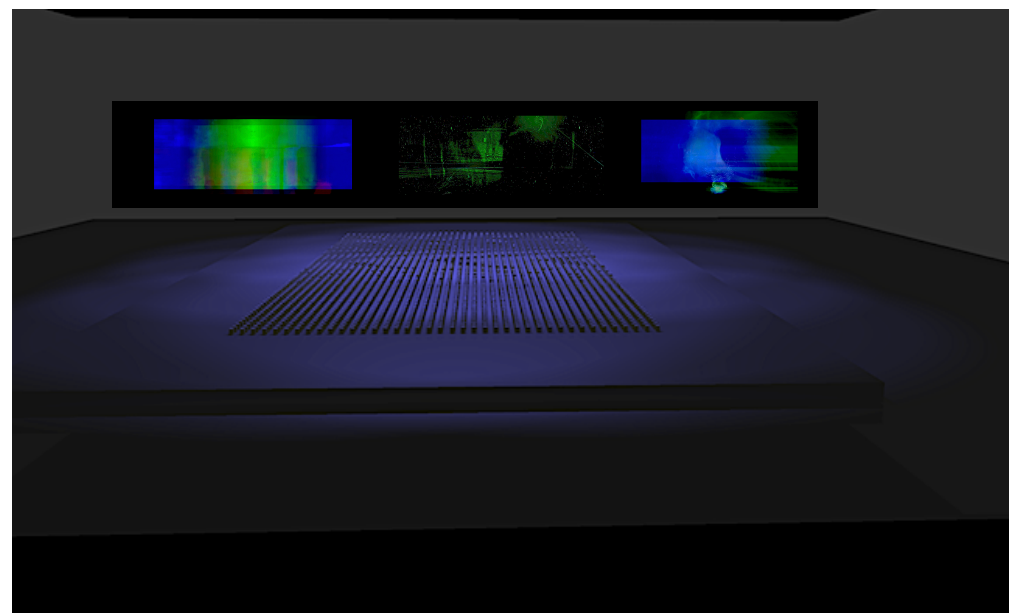
His project is done at monterey bay 930 m deep on the Sea floor. california.

The data are used to get the frequencies which are transltd to soound,



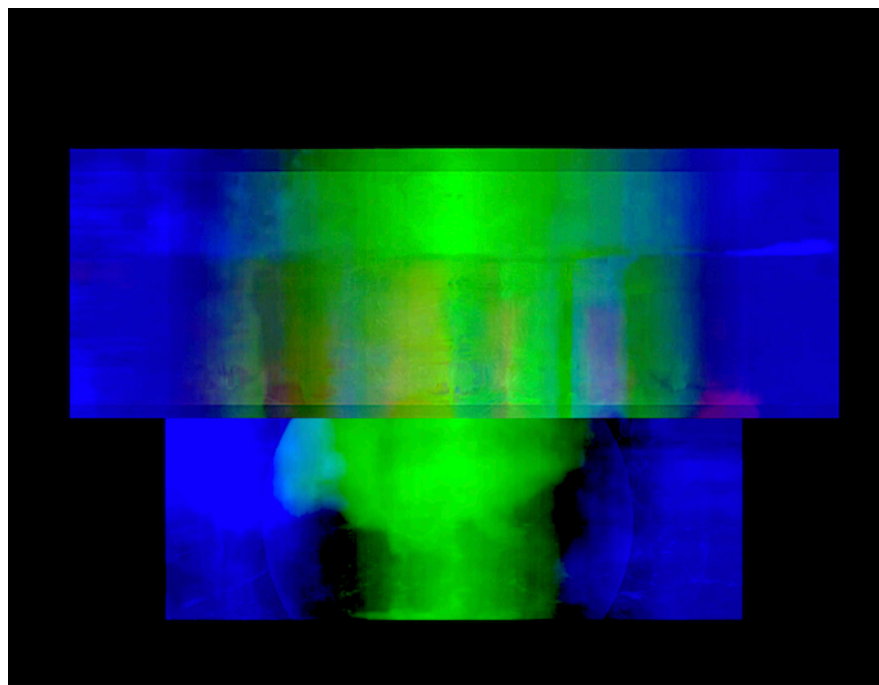


Video format with all the 202 countries earths unique color spektra



Audiovisual installation with earthsamples objects from all 202 countries together with a video based on the all countries unique colorspectra
Including the Symphony "SOIL"

Videoarbeta av videokonstnär Patrick Chartol



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ANMÄRKNING:

"Nya" länder enl. Unesco som tillkommit,
deras jordar är enl. dagens datum 1 aug.
2017, på ingående.

TIMOR LESTE

Color of the participating countries Soil





Kammarorkester Camarata Ostergothia

The Camera Ostrogothia Orchestra from Norrköping was created by Roman Reznik and Delphine Constantin Reznik in 2018.

Since its inception the purpose of the orchestra has been to give concerts dedicated to various aspects of our society so the orchestra, so the orchestra has played a number of charity concerts, among which were fundraising concerts for the people in Africa, in order to provide them with a special cleaning water with help of "Solvatten" equipment a special concert for Ukrainian refugees, with all donations going to charity in addition Camerata Ostrogothia performs music from composers associated with. The Östergötland region.

Among such composers was the recently rediscovered. Romantic composer A.E. Pratte 1796-1875 whose music had been forgotten and was now being performed again after 150 years of silence much to the delight and delight of music lovers.



Delphine
Constantin-
Reznik

Praised by the medias, the audience and her peers for her "wonderful and powerful sound", her "natural musicality", "flawless technique and impressive virtuosity", the french harpist Delphine Constantin-Reznik has also been establishing herself worldwide as a passionate advocate of her instrument, moving off the beaten tracks while looking for hidden gems from the past in the harp repertoire, working closely with contemporary composers and always setting the harp within new constellations.

Her discography as a soloist and chamber musician includes internationally acclaimed albums, such as the **World Premiere Recording of the commissioned Harp Concerto "Choryn" by swedish composer Andrea Tarrodi for dB Productions (2022) and the World Premiere Recording of the newly rediscovered swedish harpist and composer Anton Edvard Pratté's harp concerto and solo works for BIS Records (2021).**

In March 2023, Constantin-Reznik is nominated for the swedish *Grammis*, which is the most important music price in Sweden, thanks to the CD album "Four Elements" (dB Productions) featuring the music of Andrea Tarrodi and Constantin-Reznik's performance of her Harp Concerto "Choryn".

Constantin-Reznik performs regularly as a soloist the major harp concertos as well as commission works with orchestras such as the Norrköping Symphony Orchestra, Nordic Chamber Orchestra, Swedish Chamber Orchestra, the National Symphony Orchestra of Ukraine, Argovia Philharmonic, the Swedish Royal Navy Band, Minsk Chamber Orchestra, Kharkiv Philharmonic, and many others.

She is invited to give recitals and chamber music concerts in various prestigious festivals and concert venues worldwide, among others **Wöerthersee Classics** (Austria), **Debussy's house** (France), **Arpissima Salvi Bucharest** (Romania), **World Harp Congresses** in Hong Kong and Cardiff, **Swedish Royal Church, Båstad Chamber Music Festival and Old Ox Music Festival** (Sweden), **Palanga Music Festival** (Lithuania),

Fjord Cadenza and Asker Kammermusikk Festival (Norway) and frequently performs for the **Swedish Royal Family**, both at private and public venues.

Her chamber music partners include **Roland Pöntinen (piano), Johan Dalene (violin), Catherine Michel (harp), Roman Reznik (bassoon), Laura Michelin (flute).**

Constantin-Reznik's passion for discovering new repertoire for the harp has led her a few years ago to find by coincidence in archives many works of an amazing romantic harp virtuoso and prolific composer, **Anton Edvard Pratté (1796-1875)**, who, coincidentally, lived in the very same region and town than herself: Norrköping, Eastern Sweden. The- still ongoing- research project around Pratté's works has led her in the latest years to perform for the first time since the death of Pratté his harp concerto, chamber music and solo works. To celebrate the revival of his music after so many years, Constantin-Reznik even created in Norrköping the **International Pratté Harp Festival and Competition**, for which she serves as artistic director.

Several composers have written concertos, sonatas and chamber music pieces for Constantin-Reznik, among them Andrea Tarrodi, Peter Nordahl (Sweden), Naji Hakim (France), Kjell Marcussen, Morten Gaathaug and Vidar Kristensen (Norway).

Constantin-Reznik won in 2008 the **permanent Principal Harp position** with one of the leading swedish ensembles: **Norrköping Symphony Orchestra**.

As guest principal harp she has been collaborating with most of the main scandinavian orchestras, including the **Danish Radio Symphony Orchestra, Oslo Philharmonic, the Norwegian Opera, Royal Stockholm Philharmonic Orchestra, the Swedish Royal Opera, Gothenburg Symphony Orchestra**. Other collaborations in Europe and overseas as orchestra harpist include **Hong Kong Philharmonic, the Netherlands Philharmonic, Basel Symphony Orchestra, Zurich Opera Orchestra and Orquesta Filharmonica de Gran Canaria**. She has played under the baton of conductors such as among others **Franz Welsch-Möst, Jukka Pekka Saraste, Giannandrea Noseda, Esa-Pekka Salonen, Jaap Van Zweden, Daniel Harding, Alan Gilbert, Gustavo Dudamel, Myung-Whun Chung**.

Constantin-Reznik was educated in the french harp school tradition, first in **Boulogne-Billancourt Conservatory (France)** and then at the **Zurich Academy of the Arts**, and graduated with high distinctions from both schools. Her teachers were **Catherine Michel** and **Annie Fontaine**. She has been also tremendously inspired from regular classes with **Xavier De Maistre** and **Isabelle Perrin**.

During her studies, she was awarded numerous times at national and international competitions in France, Switzerland and Germany and played as orchestra harpist with *Gustav Mahler Jugend Orchester* and the *Orchestre Francais des Jeunes*.

Delphine Constantin-Reznik is passionate about transmitting her knowledge and experience to the younger generations.

She is regularly invited to give **masterclasses** among other places in the nordic countries, Italy, Poland, Romania, Ukraine, and holds since 2018 the position of harp and chamber music teacher at the **Lunnevad National Youth Music College (Sweden)**.

Nominated for grammy 2023

<https://www.delphineconstantinharpist.com/>



Roman Reznik

Principal conductor and founder of the Chamber Orchestra *Camerata Ostrogothia* (Sweden)

Reznik has gained international renown as one of the most exciting emerging Ukrainian conductors of today.

In August 2020, Reznik was the sole conductor from the LEAD! Foundation Conducting Academy selected to share the podium with eminent Finnish conductors Jukka-Pekka Saraste, Esa-Pekka Salonen, Sakari Oramo, Dalia Stasevska and Klaus Mäkelä. The concert, streamed live worldwide, marked the 90th. birthday of illustrious conducting teacher Jorma Panula at the Fiskars. Summer Festival in Finland.

In 2021, Reznik was invited by Maestro Jukka-Pekka Saraste to join the roster of the newly founded conductor's agency LEAD! Artists in Finland.

Reznik made his international conducting debut with the Szczecin Philharmonic Orchestra at the Choriner Music Summer Festival in Germany in 2018. He was immediately reinvited to conduct the orchestra in Szczecin in the following year, to high public and critical acclaim. Since then, he has been increasingly in demand, excelling in Romantic and contemporary repertoire to which he feels a particular dedication.

During 2018 and 2019, he was invited by Rune Bergman to conduct the Norwegian Festival Orchestra at the Fjord Cadenza festival in Norway, comprised of musicians from major international orchestras as Staatskapelle Dresden and the Helsinki, Calgary and Oslo Philharmonic orchestras.

Reznik's conducting résumé includes a number of leading orchestra in Europa including Royal Danish Opera Orchestra, Finnish Chamber Orchestra, I Cameristi del Maggio Musicale Fiorentino, Stavanger Symphony Orchestra, Morovia Philharmonic Orchestra, Kharkiv Philharmonic Orchestra, St. Petersburg Symphony Orchestra, Budapest Dohnany Orchestra, Athens Philharmonia, Janacek Philharmonic Orchestra Ostrava.

During the season 2021-2022 Reznik made successful debuts with Orquesta Filarmonica de Gran Canaria, Norrköpings Symphony Orchestra and Norwegian Wind Ensemble.

Reznik is the founder and principal conductor of Camerata Ostrogothia a chamber orchestra consisting of members from leading Swedish orchestras such as Gothenburg National Symphony Orchestra, Norrköpings Symphony Orchestra, Swedish Chamber Orchestra and others. Camerata Ostrogothia dedicated to music of the Classical and Romantic period. Each concert of Camerata Ostrogothia focuses on a different aspect of modern world which is why the orchestra regularly performs a number of charity concerts, including a concert that helped raise money for clean water equipment in Africa and a concert in support of Ukrainian refugees.

Reznik has collaborated with soloists such as Valery Sokolov, Johan Dalene, Pekka Kuusisto and Catherine Michel.

Reznik studied conducting and has been mentored by personalities such as Jukka-Pekka Saraste, Sakari Oramo, Jorma Panula and Christian Ehwald.

Born in Ukraine Roman has started his music training at the age of 7, while being only 16. Years old he was already admitted into the Vienna Academy of Music where he has studied with the legendary basson professor Milan Turkovic.

Besides his conducting activities he enjoys a successful international career as a soloist, chamber musician and Co-Principal bassonist of the Oslo Philharmonic Orchestra.

<https://www.romanreznik.com/>



Patrick Chartol

PATRICK CHARTOL

Composer, musician, painter, multimedia artist, Vj (Video-jockey)

Website Official website:

<https://www.patrickchartol.com/>

Member of the following musical groups:

"Claire Michael Quintet": The album "Mystical Way" was elected "Shock" by Jazz Magazine and received 2 T Télérama in 2022.

"After in Paris" (electro jazz)

“Nekropsi” (from 1998 to 2001)

"Try Paradise": The album "Try Paradise" received 3 T Télérama in 2023.

Patrick Chartol was first prize and congratulations from the jury of the Union of conservatories of Essonne (UCE)

UCE Bass Guitar Excellence Diploma

Permanent member of SACEM

He participated in recording sessions or live concerts with:

Raul de Souza, McSolaar, Dave Liebman, Claude Confortés, Paolo Fresu,

Laco Tayfa, Hubert Dupont, Didier Lockwood, Toninho Horta, Caito Marcondes, Ray Lema, Sertab Erener, Cevdet Ereker, Ariane Pick.

For him, music and visual arts are constantly linked;

each discipline enriches the other; sounds and images respond to each other as in a game of mirrors.

In July 2017, he was invited to an artist residency at La Traverse by oceanographer Diana Ruiz Pino (Nobel Prize) and collaborated with Swedish artist Leif e Boman. During this first meeting, they begin to develop the “SOIL” project:

<https://www.patrickchartol.com/world-symphony-2020>

Unfortunately the project is postponed because the composer Sven David Sandström dies and the arrival of the Covid does not help matters.

Their remote collaboration will nevertheless give birth to a series of films:

<https://youtu.be/rU8j06JAens>

<https://youtu.be/DSioD65xUkA>

<https://youtu.be/ARXn0gJRos8>

<https://www.patrickchartol.com/soil-ii-electronic-part>

In 2022, Ibrahim Spahic commissioned a video from them to be shown at the National Museum of Bosnia and Herzegovina. This video was built from the photos of Leif e Boman's exhibition and earthsounds from the massgraves in Bosnia Sarajevo:

<https://www.patrickchartol.com/still-remember>

Patrick Chartol also meets astrophysicist Cyril Lachaud and works on paintings and videos inspired by coded masks used by NASA to locate Gamma Bursts in space: <https://www.patrickchartol.com/about>

Since July 2022, Patrick Chartol has also been interested in images generated by artificial intelligence (AI) he has produced images and built films from these images:

“Futuristic Cities”: <https://youtu.be/RR7nhoEL0m4>

“Extraterrestrial Museum”: <https://www.patrickchartol.com/soil-film>

“Monsters”: <https://www.patrickchartol.com/copie-de-6>

2018 Group exhibition “Le Qu4tre, 2018 edition” (Argenteuil France)

<https://www.youtube.com/watch?v=51MSxeOQNzs>

2017 GAM E XPO (Bures sur Yvette France)

<https://youtu.be/9cSee9FAruo>

2017 Residence La Traverse in collaboration with Leif e Boman (Argenteuil France)

<https://www.l-traverse.com/>

2016 “MOVING TABLES” Gondwana (St Rémy-les-chevreuse France)

<https://www.ville-st-remy-chevreuse.fr/fiche-annuaire/gondwana/>

2016 "MOVING TABLES" Espace Benoit Frachon (Gif sur Yvette France)

<http://etudiant.aujourd'hui.fr/etudiant/sortie/tableaux-mouvants.html>

2011 Supervisor of the acoustic work “Drums Barking” by Cevdet Erek at the Gaité Lyrique (Paris France)

<https://gaité-lyrique.net/evenement/installations-kolaj-istanbul>

2000 Vj'ing for the Raul de Souza collective at the Montansier theater (Château de Versailles)

<http://www.theatremontansier.com/>

PRESS

“a new and personal musical world very suggestive and dreamlike, melodious and fascinating”

Mark Sander

“Icon of Turkish musical revival (...) his harmonies are so broken, painful that they lead to a perfect melody”

Libération

“Turkish Nekropsi quintet which makes viable a new encounter between oriental harmonies and rock (...) To a rhythmic mechanics without rigidity are added intertwining guitars and synthetic voices which have the nostalgic freshness of a certain psychedelia”

Alain Siclier Le Monde

“A surprising and confusing record. Very richly inspired. A real atypical timeless musical journey mixing progressive inspiration and classical music (influence of Fauré, Ravel) with some ethnic touches (...) the voices used as instruments form a new and personal musical world very suggestive and dreamlike, melodious and fascinating

Mark Sander

“The Music of the group After In Paris is a call to life. It gives us back the taste of lost happiness, of the joy of existing. It makes us hear the melodies of emotion, the sounds of the energy of hope, the rhythms of love. We are talking about the music of the spheres in inter-galactic space. We can speak, for After In Paris, of the music of the heart and the mind “

Claude Confortés

“thank you for Teknikolor which I listened to with pleasure”

Costa Gavras

A great group, thank you for the music”

Chan Parker

“ In front of the live scores of a certain subtlety, we find here rhythms oscillating between breakbeat, soft drum & bass and bossa. Well felt”

Coda Magazine

...Sometimes contemplative, sometimes carried away, the sound constructions of Time Cycle are those which reveal, from listening to listening, their mysteries, surprises and emotions.

Alain Siclier Le Monde

FILM MUSIC

Reality by Quentin Dupieux (with Alain Chabat, Elodie Bouchet)
Sils Maria by Olivier Assayas (Juliette Binoche, Kristen Stewart, Chloë Grace Moretz)

The double lover (François Ozon)

A place in the Caribbean

The Archer's Hand (Sebastien Simon)

The To Do List

Transparent

In Frygtelig Kvinde (Christian Tafdrup)

Sen Anlat Karadeniz (Christian Tafdrup)

View of the Spirit (Sebastien Simon)

National (Alix Barbey)

Without Kapiyi Kirinca (Tayfun Guneyer)

As we were before (film Arte / dir: Nora Kaci)

Take me away (Edmond Bensimon)

Ilgisiz (Nur Akalin)

Grass Pillow (Nicolas Worms, Valerie Archeneau)

Rock & Roll Control (Frederic Saurel)

DISCOGRAPHY

Try Paradise (BUDA Music)

Mystical Way “Claire Michael Quintet” (UVM Distribution)

Fire Horse “Patrick Chartol” (Stratospheric)

PwP “Peaceful World Project “Patrick Chartol” (Bmg Music)

Istanbul “Patrick Chartol” (All Music)

Trane Steps “Claire Michael Quartet” (Rue Balzac)

Time Cycle "After in Paris" (Harmonia Mundi)
"1998" "Nekropsi"
All Jazz "Claire Michael Quartet" (Sphinx Distribution)
Johnny Lounge "After in Paris)" (Warner)
Emotional "After in Paris" (Night Bird, Harmonia Mundi)
Mach 6 "MC Solaar" (East West)
Kafi "Akin Eldes"
Agzi bozuk ask mektubu "Umay Umay"
New Age of Reason "Lockwood & Vallet"
Teknikolor "Patrik Chartol" (Musea records)
Aksi istikamet "Nekropsi"
Dream/Dream/Traum/Sogno "Laurent Saiset"



Diana Ruiz Pino

CV – DIANA RUIZ PINO OCEANOGRAPHER
BIOGEOCHEMIST

*Chair of IMBeR International Project (Integrated Marine
Biosphere Research) I*

PERSONAL: Born October, 1964 (Medellin-Colombia),
French and Colombian citizen

Life in France since 1982. Several years in Argentina, Indonesia and
Turkey.

Less than one year in New Caledonia, China and England
Mother tongue Spanish, spoken and written French and English, some
bases in Turkish.

- Love the Sea, Art, Philosophy, travel and plays chess

POSITION: Enseignant et Chercheur : Sorbonne Université SU Paris -
FRANCE Researcher associated to LOCEAN Laboratoire
d'Océanographie Climatologie Expérimentation et Approches
Numériques (CNRS-UPMC/MNHN-IRD)

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DEGREE: PhD (1990) Oceanography Université de Paris VI (UPMC)-
France
MSc 1986 Geophysics and Geochemistry , Université de Paris VII,
France

POSITIONS HELD: Post Doc James Rennel Center, Southampton, UK
(1990)

Maître de Conférences University Pierre et Marie Curie, UPMC Paris
(1990-2017) Associated researcher ORSTOM French Institut for
scientific research and development, Noumea, New Caledonia, 1995 (6
months).

**Sabbatical Period : Creation of an International Program in the Antarctic Weddel
Sea.** Researcher Laboratorio de Oceanica Dinamica, SHN Servicio de Hidrografia
Naval, Buenos Aires Argentina (1996-1998),

Classes: Carbon Cycle in the Ocean Universidad de Buenos Aires-Argentina
(2006-2016), 50 hours biannual teaching)

**Sabbatical Period : Creation of an Ocean CO2-Acidification Team and
Laboratory.** METU Middel East Technical University, financially supported by
Tubitak, IMS Erdemli and Ankara Campus.(Sep-2015-2016)

TEACHING & FORMATION: Responsible supervisor of 20 PhD's, 5 postdocs and
more than 60 Msc, Master and Licenses.

University courses for Physics (mechanic, thermodynamic and quantum),
Mathematic and Statistic for biology and Geology , Science methodology and
History of Science undergraduate and graduate level: Oceanography,

Climate change, Ocean environment, Geosciences, Biogeochemical cycles, CO2 and
Iron Cycle, Acidification and OMZ (Oxygen Minimum Zone) , Ocean
biogeochemical and Ecosystem model, Biological crises.

AWARDS: USA Media prize 1990. The publications related to Lead increase in the
Mediterranean Sea due to petrol used in European countries were distributed on more
than 700 USA communication media.

Best Conference 1998. Polar Ocean and Climate Change, International meeting,
Tromso, Norway. Austral Ocean role on atmospheric CO2 increase.

Chancellery of Paris and île de France Universities, 2000, best pH topics: Human
activities impact on evolution of biogeochemical cycles in the Mediterranean Sea (S.
El Boukhary PhD UPMC).

French newspaper le Monde Prize, 2002. Atmospheric CO2 increase effect on
coral reefs (A. Amat PhD).

Paris City Council prize, 2006. Contribution to science attributed to woman
scientist working in Paris.

IPCC International Panel for Climate Change, 2007, Nobel Peace Prize

INTERNATIONAL ACTIVITIES AND RESPONSIBILITIES

- **European Union Working Group 3 (WG3) 1996-2000.** *The Air sea flux long lived climate active gases*

- *Member of the Threshold for Eutrophication in the Sea (European Union). 2000-2008.*

- **Member of the COST** action 735 organised by the **SOLAS** (Surface Ocean Low Atmosphere System) International

Program. **(2006-2010).** Tools for Assessing Global Air-Sea Fluxes of Climate and Air Pollution Relevant Gases , Member of the Work Group WG3 : Carbon Dioxide, Methane and Nitrous Oxide.

- **Member of the IPCC** ,2006-2010, contribution to the ocean biogeochemical model and CO2 studies in the Austral Ocean. An review IPCC Report (2015, 2020, 2021)

- **Call HORIZON 2020** European Union call. Participation to the team in charge of the Arctic Polar Research call definition

- **Chair International Project IMBeR**, Integrate Marine Biosphere and Ecosystem Research, since September 2022.

- **PI COCA Project**, Coastal Observatory for Climate, CO2 and Acidification in the Global South Ocean Decade , United

Nations, 2021-2030

- **Co-PI Marine Heat Waves Exemplar** , GOOS, Ocean Decade, United Nations. , since 2022. .

Chief scientist and organiser of more of 20 research oceanographic cruises around the global ocean from Polar to tropical

regions, including international Vessel (French, Spanish, Chilean, Peruvian, Mexican, Ice breaker : Argentinian, Chinese, British).

Organizer of 5 International Workshop and International Class (UPMC and SU France, SOC-UK, Universidad de Concepcion-CHILE, METU Turkey, Universidad de Cartagena Colombia).

MAIN EUROPEAN AND INTERNATIONAL PROJECTS

GEODYME 1993-1996. EU-FP3. Dynamic and Geochemistry coupled in the Mediterranean Sea. MTP 2 MAST

MATER 1996-1999. EU-FP4. Mass Transfer and Ecosyste Response. EU (MAST 3) program.

IRONAGE EU program, 2000-2004, 5th Framework Program (EU). *Leader of work package Coccolithophores*

DAMOCLES (participation 2008-2009). EU-FP6. Developing Arctic Modelling and Observing Capabilities for Long-term Environmental Studies. IPY International Polar year.

ATP. Arctic Tipping Point, 2009-2011. EU-FP7. *Work Package Leader : melting ice, CO2 and phytoplankton.*

ICE ARC (Ice melting impact in the Arctic Ocean, 2014-2016, EU-FP?). *Coordinator of Task CO2 and Acidification.*

WAPITI, 2017-2020, E.UERCEuropeanProject (P.I.J.B.Sallé-LOCEAN). *Leader Carbon and Biogeochemistry team. Coop with BAS (British Antarctic Survey), British Icea Breaker J.C. Ross.*

APASCH 2016-2021, Development of a new sensor to measure pH and Alkalinity in the fresh and seawater.

COCAS, 2021-2030. Coastal Observatory for Climate, CO2 and Acidification in the Global South. *Co-PI D. Ruiz and A. Lazar, An OCEAN DECADE Project, United Nations.*

INTERNATIONAL COLLABORATORS

Japan Shizuoka University, Pr Yoshimi Suzuki

China : PRIC Polar Research Insitut of China and SOA (Atmosphere and Ocean Service of Chine) 2th Laboratory of Oceanography, Hangzhou. Arctic and Antarctic Research

Argentina : SHN (Servicio de Hidrografia Naval) laboratorio de Oceanica Dinamica and UBA Universidad de Buenos Aires, CIMA (Centro de Investigacion Mar y Atmosfera), UMI Unité Mixte International de recherche France-Argentina. South Atlantic and Antarctic research.

Chile Universidad de Concepcion Centro COPAS

Peru : IMARPE Instituto del Mar y de la Pesca, Lima – Peru, laboratorio de Biogeoquimica.

Turkey : Ankara University, Erdemli Marine Institute, Earth Science and Oceanography department.

Colombia : Universidad Nacional, Universidad de Cartagena y Universidad Javeriana.

Senegal : Universidad de Dakar.

European Countries:

Spain (Instituto de Investigaciones Marinas, CSIC-IIM Vigo; Departament d'Oceanografia Física i Tecnològica, Institut de Ciències del Mar, CSIC Barcelona), Universidad de Gran Canaria.

England : NOC National Oceanography Center Southampton.

Germany : AWI Alfred Wegner Insitut, Bremenhaven, Carbon Team.

_PHD DIRECTION

P. Prunet. 1995. Assimilation de données dans un modèle unidimensionnel couplant physique et biogéochimique de la surface de l'océan. Université Paul Sabatier, Toulouse, France..

P. Pondaven. 1997. Modélisation couplée Physique et Biogéochimique de la pompe à silicium dans l'Océan Austral. Comparaison avec le Pacifique Nord et l'Atlantique Nord. Université de Bretagne Occidentale, spécialité Océanographie Biologique.

J. J. Taboada. 1999. Aplicacion de modelos numéricos al estudio de la hidrodinamica y del flujo de particulas en el mar Mediterraneo. Thèse Européenne soutenue à l'Université de Santiago de Compostela. Departamento de Fisica Non Lineal.

R. Arraes-Mescoff. 2000 (Brasil). Etude du comportement des particules dans la colonne d'eau Méditerranéenne avec l'utilisation de traceurs géochimiques et la modélisation. Thèse de l'Université Paris VI, DEA Océanologie Biologique.

A Amat. 2000. Croissance corallienne et variations du CO2 atmosphérique : implications biologiques et climatiques. Université de Paris VI, Océanologie, Météorologie et Environnement, option Biogéochimie.

M. Graco. 2002. (Argentina). Cycle de l'Azote dans la ZMO du système de Humboldt. Océanologie Météorologie et Environnement. Thèse en Co-tutelle Université de Paris VI France-Université de Conception- Chili.

A. Paulmier. 2004. Zones de Minimum d'Oxygène de l'océan moderne. Une étude focalisée dans l'OMZ du Pacifique Sud-Est. Université de Paris VI. Océanographie.

S. El-Boukhary. 2005. (Marroc) Impact des activités humaines sur les cycles biogéochimiques en mer Méditerranée, Université de Paris VI. Océanologie Météorologie et Environnement.

B. Levu. 2005. Le rôle de la biocalcification à travers l'organisme modèle *Emiliana huxleyi* : Quand la mer devient blanche. Université de Paris VI. Océanographie.

I. Masotti. 2006 (Chili). Impact des efflorescences de cyanobactéries du genre *Trichodesmium* sur la pompe biologique et le cycle du carbone. Approche expérimentale et modélisation. Université de Paris VI. Océanographie.

IA. Bianchi 2010. (Argentine) Flux de CO₂ en mer de Patagonie, Université de Paris VI, Océanographie.

P. Coupel. 2012. Impact de la fonte de la glace sur le phytoplancton et le CO₂ de l'océan Arctique. Université de Paris VI-UPMC. Océanographie Biogéochimique.

A. Bouvet. 2013-2014. 2 Years. Le phytoplancton durant un été de fonte record de la banquise l'Arctique. Université de Paris VI-UPMC. Second Institute of Oceanography, Hangzhou-China.

L. Perrot. 2017.. Amélioration des algorithmes de couleur de l'eau : une méthode basé sur les réponses de matières en suspension, des coccolithophoridés et du phytoplancton aux forçages météorologiques Université de Bretagne Occidental, Co-Directeur F. Gohin (IFREMER) , Bourse CNES et IFREMER.

B. Broche. 2018. Impact du Sulfur sur l'acidification et la calcification . Une approche des simulations in vitro des océan ancien et actuel. Université de Paris VII. Bourse Ministère. Ecole Doctorale N°474 Interdisciplinaire Européenne Frontières du Vivant (Programme Bettencourt), Universités Paris Descartes et Paris Diderot. Coopération avec le CR2P Centre de recherche sur la pale biodiversité et les paleoenvironnements et le MNHN, Codirection Silvia Gardini, et A. Bartolini.

H. Isbert. 2017. (Argentina) La bomba a carbono en el mar del Weddell. Université de Buenos Aires UBA. Directeur A. Bianchi (SHN- Buenos Aires Argentine), Laboratoire argentin Océanica Dinamica, LOD (SHN, Buenos Aires-Argentine).

C. Khal. 2018. Los flujos mar-atmósfera de CO₂ en Atlántico Sudoccidental, Université de Buenos Aires UBA. Directeurs A. Bianchi (SHN-Buenos Aires Argentina) et D. Ruiz Pino (SU), Financiamiento CONICET.

H. Wang, November 2019-2023. Biocalcification Crises from Modern to Past Ocean: the role of Acidification and Deoxygenation, Sorbonne Université. Director pHD: D. Ruiz Pino (SU) , S. Gardin (CNRS). LOCEAN et CR2P. Financial Support SOA China.

N. Sabata. Mars 2020-2023. Impact of sea ice melt on acidification and phytoplankton in the Arctic. Hangzhou University. China SOA financial support.

Contribution to other pHD

M. Levy. 1996, LODYC (UPMC-CNRS, Paris). Modélisation des processus biogéochimiques en Méditerranée Nord-Occidentale. Cycle saisonnier et Variabilité mesoéchelle. Co- encadrement et formation 1 an. Océanologie, Météorologie et Environnement, option dynamique. Coopération avec L. Mémery (Chercheur CNRS au LODYC-LEMAR) et J.M. André (Chercheur CEA LSCE Saclay/IRD).

V. Athiaz. 2000. 3 Month. Une méthode d'estimation paramétrique non-linéaire pour modéliser les flux de matière dans la colonne d'eau océanique. Application à l'Atlantique tropical nord-est (sites EUMELI), Université Paul Sabatier-Toulouse Ecole Normale Supérieure de Lyon. Collaboration avec C. Jeandel, LEGOS-Toulouse.

POST-DOC AND INVITED SCIENTIST

R. Tian, 1992-1993. Prédiction du devenir du plomb en Méditerranée. Laboratoire de Chimie Marine de Shanghai. Financement cellule KC. Wong. *Contrat U. E. Mast II- Méditerranée*.

F. Louanchi. 1996-1997. Cycle du CO₂ dans l'Océan Austral modèle-mesures à l'échelle interannuelle en un point fixe : Kerfix, puis application à l'échelle de tout l'Océan Austral. Coopération France-Allemagne LBCM-Paris et Alfred Wegener Institut (AWI, Allemagne, D. Wolf-Gladrow et M Hoppema). *Financement PROCOPE Ministère de relations Internationales*.

I. Schloss. 2002. Poste Rouge CNRS, 6 mois. Chercheur IAA Instituto Antartico Argentin (DNA, Departamento Nacional Antartico). Traitement de données CO₂ et phytoplancton obtenus dans le projet ARGAU. Laboratoire LBCM (CNRS-UPMC).

G. Ferreira. 2002. Poste Rouge CNRS, 6 mois. Chercheurs à l'IAA Instituto Antartico Argenino (DNA, Departamento Nacional Antartico). Traitement de données productivité primaire et photosynthèse, projet ARGAU. Laboratoire LBCM (CNRS-UPMC).

V. Rerolle Décembre 2014-2015, Capteurs automatiques pour la mesure du pH dans l'océan Arctique, *Contrat de l'Union Européenne, ICE-ARC European Union Project.*

Pr. J. Chen, 2th SOA Laboratory, China. Arctic and Antarctic Cooperation France-China. 1 month at LOCEAN.

Pr. A. Winter, Indiana State University and Puerto Rico University (USA) vivisitng and sabbatic period (2018) **A.M. Cobo Viveros,** 2017-2018, Phytoplankton and CO2 in the Arctic Ocean, Finncially supported by SOA Ocean China State, SOA, CHINARE Arctic cruise.

A. Winter, Indiana , Prof. University USA and Universidad de Puerto Rico. CALHIS Project (ANR).

Claudia Karez, 2018-2021, Jardin Botanico Rio de Janeiro , Brasil. COCAS Project, submission to Ocean Decade United Nations.

Lina Barrios 2017-2023. Manchester University and Plulouth Laboratory. CO2 and Acidification , teaching, , creation a laboratory in Colombia. Safflower Caribbean Sea Oceanographic Cruise.

SELECTED PUBLICATION

50 peer reviewed Publication, 1 Article in Nature

Author of 1 Book and more than 100 popular articles and reports, HF 25

Pondaven **P. Ruiz-Pino D.,** Fravallo C., Tréguer P. and C. Jeandel. 2000. Interannual variability of silicon and nitrogen biogeochemical cycles at the time-series station KERFIX between 1990 and 1995 - a 1D modelling study station. Deep Sea research part I, 47, 223-257

Dadou I., F. Lamy, C. Rabouille, **D. Ruiz-Pino,** V. Andersen, M. Bianchi and V. Garçon. 2001. An integrated biological pump model from the euphotic zone to the sediment : application in the Northeast tropical Atlantic. In press Deep Sea Research on JGOFS North Atlantic synthesis. II, 48, 2345-2381.

Louanchi **F. D. Ruiz-Pino,** C. Jeandel, C. Brunet, Bernard Schauer, A. Masson and Alain Poisson. 2001. Dissolved Inorganic Carbon, Alkalinity, Nutrient and Oxygen Seasonal and Interannual Variations in the Upper Ice-Free Antarctic Ocean. Deep Sea Research I, 48, 1581-1603.

Bethoux J. P., Morin **P., D. Ruiz-Pino.** 2002. Mediterranean Ecosystem : Chemical evidence of evolution due to environmental change. Deep Sea Research, 49, 2007-2016.

Ruiz-Pino D., J. Taboada, P. Morin and J. P. Bethoux. 2002. Evolution of the recent Mediterranean circulation changes, Journal of Marine System, Special Issu for the European MATER Program. *Invited paper.*

Schloss I. R., G. A. Ferreyra and **D. Ruiz-Pino.** 2002. Phytoplankton Biomass in Antarctic Shelf Zones : A conceptual model based on Potter Cove, King George Island. Journal of Marine System, Volume 36, Issues 3-4-October, Pages 129-143..

Le Vu B., **D. Ruiz Pino,** A. Amat, A. Poisson, H.J.W. De Baar, E. Buitenhuis 2004. Who is *Emiliana huxleyi*? From a data synthesis to a growth quota model. Synthesizs of WP 4 European program IRONAGES. p.41. www.nioz.nl/nioz_nl/d0e54483aa31c55b01a9fb11c0c23df4.php

Bianchi A., L. Bianucci, A. Piola, **D. Ruiz-Pino,** I. Schloss, A. Poisson, C. Ballestrini. 2005 Vertical Stratification and Air-Sea CO2 fluxes in the Patagonian Shelf, Journal of Geophysical research (J.G.R) .C. Vol 110, N° 7 7 jully.

- Béthoux J.P., M. S. El Boukhary, **D. Ruiz-Pino**, P. Morin, C. Copin-Montégut. 2005. Nutrients (N,P,Si) Oxygen (O₂) and Carbon © ratio, CO₂ sequestration and anthropogenic forcing in the Mediterranean Sea. Invited paper for the Handbook Chemistry of the Mediterranean Sea, Springer-Verlog, Heidelberg, Vol. 5, Part K, 67-86..
- Paulmier A., **D. Ruiz-Pino**, V. Garçon, L. Farias. 2006. Maintaining of the Eastern South Pacific Oxygen Minimum Zone (OMZ) off Chile. Geophysical Research Letter, Vol 33, 2006.
- Paulmier A., **Ruiz-Pino, D.**, Garçon, V., Ulloa, O. et L.Farias. 2007. Biogeochemical anomalies in the Oxygen Minimum Zone (OMZ) off Chile. *Guyana*, Vol. 70, ISSN 0717-52X.
- Masotti I., **D. Ruiz-Pino**, A. Le Bouteiller. 2007. Phothosynthetic characteristics of Trichodesmium in the southwest Pacific Ocean : importance and significance. Marine Ecology progress series, Vol 338, 47- 59, May.
- Schloss I. , G. Ferreyra, M. E. Ferrario, G. O. Almandoz, R. Codina, A. A. Bianchi, C. Ballestrini, H. Ochoa, **D. Ruiz-Pino**, A. Poisson. 2007. Role of plankton communitites in sea-air variations in pCO₂ in the SW Atlantic Ocean. Marine Ecology progress series, MEPS, Vol. 332 : 93-106.
- Paulmier A., **D. Ruiz-Pino** and V. Garçon. 2008. The oxygen minimum zone (OMZ) off Chile as an intense source of CO₂ and N₂O. Continental Shelf Research, 28, 20, 2746-2756.
- Paulmier A., and **D.P. Ruiz-Pino**. 2008. Oxygen Minimum Zones (OMZs) in the modern ocean. Progress in *Oceanography*, doi:10.1016/j.pocean.08.001.
- Bianchi A.A., **D. Ruiz-Pino**, H. G. Isbert Perlender, A. P. Osiroff, V. Segura, V. Lutz, Moira Luz Clara, C. F. Balestrini and Alberto Piola. 2009. Annual balance and seasonal Variability of sea-air CO₂ fluxes in the Patagonian Sea: their relationship with fronts and chlorophyll distribution. Journal of Geophysical research, Vol 114, C03018, doi:10.1029/2008JC004854.
- Paulmier, A., **D.P. Ruiz-Pino**, and V. Garçon. 2010. Carbon maximum zone (CMZ) formation associated with Oxygen Minimum Zone (OMZ). *Biogeoscience*.
- Beaufort, L., I. Probert, T. de Garidel-Thoron, **D. Ruiz-Pino** et al., 2011. Sensitivity of coccolithophores to carbonate chemistry and ocean acidification, *Nature*, 476(1), 80-84.
- Mermex Group (including **D. Ruiz Pino**), 2011 Marine Ecosystems Responses to climatic and anthropogenic forcings in the Mediterranean. Progress in Oceanography, 2, 91: 97-166. doi : 10.1016/ j.pocean.2011.02.003
- Coupel P., H. Y. Jin, M. Joo, R. Horner, H. A. Bouvet, M.-A. Sicre, J.-C. Gascard, J. F. Chen, V. Garçon, and **D. Ruiz-Pino**. 2012. Phytoplankton distribution in unusually low sea ice cover over the Pacific Arctic. *Biogeosciences*, 9, 4835-4850. doi: 10.5194/bg-9-4835-2012.
- Coupel P., Matsuoka A., **Ruiz-Pino D.**, Gosselin M., Claustre H., Marie D., Tremblay JE., Babin M. 2015 (February), 2015. Pigments signature of the phytoplankton communities in Beaufort Sea, special issue MALINA Project, *Biogeosciences* 12, 991-1006. Doi :10.5194/bg-12-991.
- Rérolle V. **D. Ruiz Pino**, M. Rafizadeh, S. Loucaides, S. Papadimitrou, M. Mowlem, J. Chen. 2016. Measuring pH in the Arctic Ocean : Colorimetric method or SeaFET ? *Methods in Oceanography* 17, 32-49.
- Perrot L., F. Gohin, **D. Ruiz-Pino**, L. Lampert, M. Huret, A. Dessier, P. Malestroit, C. Dupuy, P. Bourriau. Coccolith-derived turbidity and hydrological conditions in May in the Bay of Biscay. 2018. Progress in Oceanography, Elsevier, 2018, 166, pp42-53. 10.1016/j.ocean.2017.12.008. hal-01675026.
- Kahl, L.C., Bianchi, A.A., Osiroff, A.P., **Ruiz Pino, D.**, and Piola, A.R. 2017: Distribution of sea-air CO₂ fluxes in the Patagonian Sea: Seasonal, biological and thermal effects, *Continental Shelf Research*, 143, 18–28.
- Oziel, Laurent & Neukermans, Griet & Ardyna, Mathieu & Lancelot, Christiane & Tison, Jean-Louis & Wassmann, Paul & Sirven, Jérôme & **Diana, Ruiz** & Gascard, Jean-Claude. 2017. Role for Atlantic inflows and sea ice loss on shifting phytoplankton blooms in the Barents Sea. *Journal of Geophysical Research: Oceans*, 122, 2169-9291. 10.1002/2016JC012582

Paulmier, A., **D.P. Ruiz-Pino**, and V. Garçon. 2010. Carbon maximum zone (CMZ) formation associated with Oxygen Minimum Zone (OMZ). *Biogeoscience*.

Beaufort, L., I. Probert, T. de Garidel-Thoron, **D. Ruiz-Pino** et al., 2011. Sensitivity of coccolithophores to carbonate chemistry and ocean acidification, *Nature*, 476(1), 80-84.

Mermex Group (including **D. Ruiz Pino**), 2011 Marine Ecosystems Responses to climatic and anthropogenic forcings in the Mediterranean. *Progress in Oceanography*, 2, 91: 97-166. doi : 10.1016/ j.pocean. 2011.02.003

Coupe P., H. Y. Jin, M. Joo, R. Horner, H. A. Bouvet, M.-A. Sicre, J.-C. Gascard, J. F. Chen, V. Garçon, and **D. Ruiz-Pino**. 2012. Phytoplankton distribution in unusually low sea ice cover over the Pacific Arctic. *Biogeosciences*, 9, 4835-4850. doi:10.5194/bg-9-4835-2012.

Coupe P., Matsuoka A., **Ruiz-Pino D.**, Gosselin M., Claustre H., Marie D., Tremblay JE., Babin M. 2015 (February), 2015. Pigments signature of the phytoplankton communities in Beaufort Sea, special issue MALINA Project, *Biogeosciences* 12, 991-1006. Doi :10.5194/bg-12-991.

Rérolle V. **D. Ruiz Pino**, M. Rafizadeh, S. Loucaides, S. Papadimitrou, M. Mowlem, J. Chen. 2016. Measuring pH in the Arctic Ocean : Colorimetric method or SeaFET ? *Methods in Oceanography* 17, 32-49.

Perrot L., F. Gohin, **D. Ruiz-Pino**, L. Lampert, M. Huret, A. Dessier, P. Malestroit, C. Dupuy, P. Bourriau. Coccolith-derived turbidity and hydrological conditions in May in the Bay of Biscay. 2018. *Progress in Oceanography*, Elsevier, 2018, 166, pp42-53. 10.1016/j.ocean.2017.12.008. hal-01675026.

Kahl, L.C., Bianchi, A.A., Osiroff, A.P., **Ruiz Pino, D.**, and Piola, A.R. 2017: Distribution of sea-air CO₂ fluxes in the Patagonian Sea: Seasonal, biological and thermal effects, *Continental Shelf Research*, 143, 18–28.

Oziel, Laurent & Neukermans, Griet & Ardyna, Mathieu & Lancelot, 1 Jérôme & **Diana, Ruiz** & Gascard, Jean-Claude. 2017. Role for Atlantic inflows and sea ice loss on shifting phytoplankton blooms in the Barents Sea. *Journal of Geophysical Research: Oceans*. 122. 2169-9291. 10.1002/2016JC012582.

Diana, Ruiz & Lazar, Alban & Karez, Claudia & Artigas, Luis Felipe & Barrios, Lina & Brochier, Timothé & Chapa-Balcorta, Cecilia & Chen, Jianfang & Cirano, Mauro & Dahou, Tarik & Diakhate, Moussa & Dottori, Marcelo & Garcia, Carlos & Hernandez-Brito, José & Idrissi, Mohammed & Arne, Körtzinger & Piola, Alberto & Rueda Roa, Digna & Sohau, Zacharie & Zapata-Ramírez, Paula A. 2021. A predicted Ocean : One Ocean, One Planet.

Laura Camila Salazar Sanchez, Alberto Acosta, Cristian Camilo Romero Tibabuzo, Jürgen Guerrero- Kommritz, Pedro Ricardo Duenas, Guiomar Michael Diaz Sanchez, Valentina Bocanegra, Arturo Acero, Nestor Hernando Campos, Monica Puyana Hegedus, Sven Zea, **Diana Ruiz Pino**, Marina Fauna, Taganga Bay, Colombian Caribbean Sea. 2021. Pontifica Universidad Javeriana Eds. 140pp. (**Book**)

Li, Hongliang & Chen, Jianfang & **Diana, Ruiz** & Zhang, Jingjing & Jin, Haiyan & Zhuang, Yanpei & Youcheng, Bai & Ren, Jian & Li, Yangjie. 2022. Overlooked contribution of the biological pump to the Pacific Arctic nitrogen deficit. *Science China Earth Sciences*. 65. 1-13. 10.1007/s11430-021-9916-1.



leif.e.boman

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Sound composer, Visual artist and architect, working and living in Stockholm Sweden, Linköping Sweden, Palma de Mallorca Spain, Marrakech Morocco.

”One of the most interesting and important artist working today

(*ART IN AMERICA*)

” When You looking at the art of boman, you can't be passive, but have to actively put yourself in relation to what you see and hear...His art deeply affects me and there is no way to escape”

(*Bo Borg, art critic, member of the*

Association Internationale des Critique d'art, AICA).

His pioneering work and use of emission spectroscopy enables him to listen to the frequencies that the material itself limits. These emission of mattergy are then subject to analysis, the transformation into audible sounds, reflection and composition.

leif.e.boman has never been satisfied with Communication of the eye alone in his work. He has sought out places where dramatic events have taken place. And once there, he has literally buried himself in and collected soil specimens which he then continually ongoing worldwide project that had its start in the early 1990s. This specimens have followed him to new projects and meetings with other soil samples and new visuals ideas in a constant exploration of their visual and symbolic characteristics. For boman, the meeting with the place always includes the feeling that there must be something more; something unsaid that no amount of imagination or courage may be spared to uncover. If there is a message, you first have to find a Way to hear it; only then can the attempt at interpretation begin. To find that He working together with scientist around the globe. Some important for him is the nobelprize winner Diana Ruiz Pino at Sorbonne University in Paris.and the video artist and the musician Patrick Chartol.

A main project is the project is "SOIL" where he collaborates with the video artist and musician Patrick Chartol. The project is based on the soils of all the world's 202 countries, which have developed a method with researchers to make the soils audible and visual.

The method is an adapted analysis method based on emission spectroscopy, the analysis of which gives a result in wavelengths that can also, using a mathematical method, make the earths audible and visible. Based on that result, Boman and Chartol have create various projects where the main part is ground sound and videos based on the analysis results of all 202 countries soil.

Some important Bienaler and Exhibition:

Bienal Chongju National museum Chongjy South Korea

Bienal Art in Nature Kongju South Korea
Bienal Contemporary Art Museum Santiago de Chile

Bienal Omori Bellport Tokyo Japan

Bienal Contemporary Art museum Osaka Japan
Olympic game Athen Artiade Swedish representant in art.
Contemporary Art Museum Barcelona MACBA
Opening Perfoprmanse UNESCO International Year of Biodiversity
2010 at Musèum National D' Historie Naturelle Paris.
Bienal Marrakech 2 years.

Invited to create the music for opening of Climate conference in Paris,together with Sven-David Sandström.

Invited to create the music for the opening of Climate conference in Copenhagen together with Sir. Niels Lan Doky, Mark Warford, Joss Stone and Dave Stewart (eurythmic)

Some important work is "SOIL"

The world symphony "SOIL" has been created by Leif and Patrick together with Sven-David Sandström, Sven-David is Sweden's most important composer of classical symphonies. "SOIL" is a symphony for complete symphonic orchestra for 45 minutes in 7 movements that includes Leif and Patrick's earth sound composition and the countries' unique wavelengths in video format. They have worked in many UNESCO projects and even UNICEF in South Korea.

Some other important partners;

Sir Niels Lan Doky Denmark, Dave Stewart (Eurythmics) U.S.A., Didier Lockwood France, Joss Stone U.K., Mark Warford U.S.A. Mark Nielsen U.S.A., Yoko Ono U.S.A., Kim Cascone "one of the sound creators in Tween Peaks" U.S.A. The cultural workers at the Royal Theater Dramaten Stockholm. Bibi Andersson Swedish actor.

Sven-David Sandström.

President Ibrahim Spahic International Peace center in Sarajevo.

Artist Edin Numankadic Sarajevo.

Patrick Chartol France.

UNESCO.

International Commission for UNESCO.

SIDA Sweden.

All Swedish Embassy worldwide.

All foreign embassies in Scandinavia.

Linköping University Scientist Hasan Dzuho.

Oceanographer and Nobel Prize winner Prof. Diana Ruiz Pino.

UNICEF South Korea. Researcher Bengt Sandell and researcher Hasan

Dzuho Linköping University.

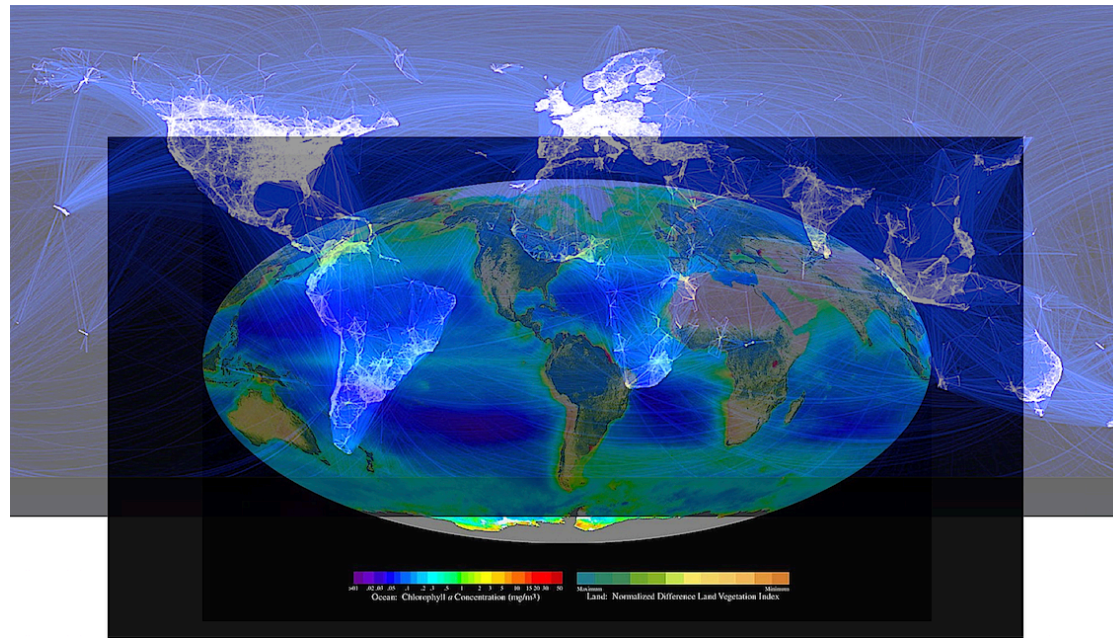
And many others.

<https://unesco.se/konstnaren-leif-e-boman-ger-jord-en-talan-i-projektet-soil/>

Med detta har inte tystnaden lägrat sig över gränslandet >> spoken sound <<. Det finns nämligen heroiska alkemister i vår samtid som bokstavligen vill få stenar och stoft att tala, även om de gått den yttersta domen i förväg. Jag tänker på ljudkonstnären Leif E. Bomans verk ge.nos0911b. skivan baksidetext sätter oss direkt in i handlingen: >> Never before has it been possible to hear the actual voices that must be hidden in ashes and concrete dust. In attempt to reveal the voices inside the remains after the catastrophe at WTC, NYC, a combined effort of artistic and scientific work has made it possible to make the unique composition of these hidden voices you can hear on this CD.<< 1 Boman söker upp platser där dramatiska händelser ägt rum, inklusive Ground Zero i New York efter elfte september, där han samlade in aska och betongdamms prover i fyra plastpåsar. I ett laboratorium förbrändes de till gas, lågans våglängder reproducerades i ett diagram som sedan gavs akustisk form. Ock plötsligt kunde askan och betongdammet avlyssnas! Framställningen avslutades med ett citat ur Lukasevangeliet 19:40 >> Jag säger er att om de tiger kommer stenarna att ropa. << När Boman påstår att han med konstnärliga och >> vetenskapliga << metoder framkallat röster ur stoftet från Ground Zero borde vi sakligt fråga oss hur framkallningen gått till. Finns det ett väsen att locka fram eller är det ur den konstnärliga utstyrda processen som de används, och helt arbiträra, parametrarna tillkommit som legat till grund för framställningen av pysandet och väsandet vi kan höra på skivan. Självklart är det det senare.

Men tack vare Bomans >> intuitiva << stycke har själva begreppet >> spoken sound << lösts upp i något som ligger bra nära intet, i en lågande spegelbild av ett gränsland där inte bara talet ljuder utan även ljudet talar, och där stoft och stenar har fått röst...

Teddy Hultberg



OUR PLANET SUFFERING

When our earth can speak to us, we must listen.
and spread the voices of the earth out into the world.

A new valuable and necessary project has been started to make it possible to "hear" our
earth speak to us.

”When seeds buried in the dark earth
then the inward secrets become a flourishing garden”

RUMI