

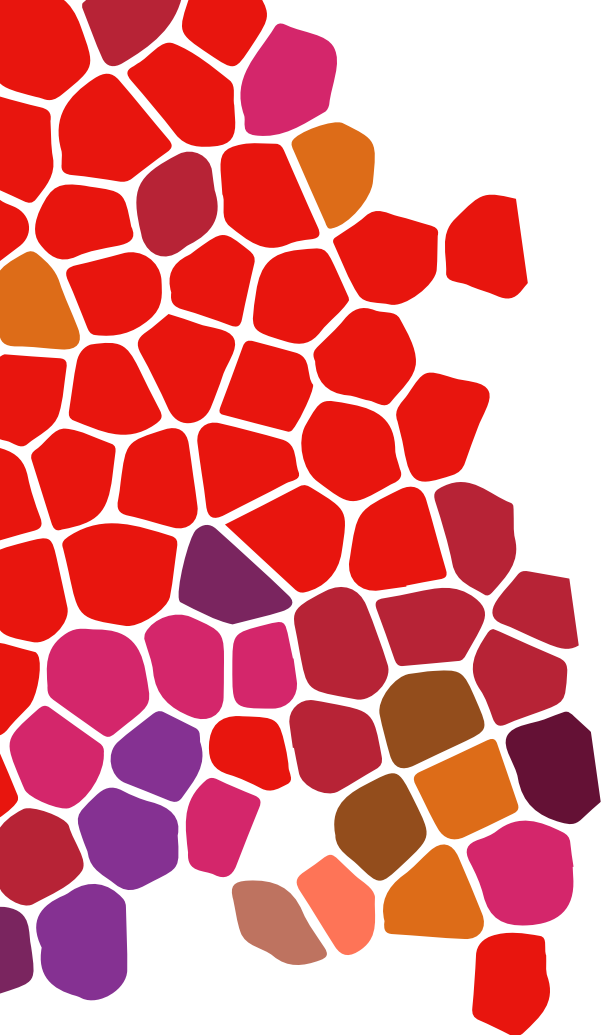
ANNUAL REVIEW 2017

Working together
for safer colorants



ETAD

The Ecological
and Toxicological
Association
of Dyes
and Organic
Pigments
Manufacturers



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Mission statement

The purposes of the association are to:

- Coordinate and unify the efforts of manufacturers of synthetic organic colorants to minimize possible impacts of these products on health and the environment.
- Achieve these ends by the most economic means without reducing the level of protection of health and the environment.
- Encourage harmonization of health and environmental regulations in key geographical areas.
- Represent the positions and interests of the manufacturers of organic colorants towards authorities, public institutions and media.
- Promote responsible environmental and health risk management during manufacture, transport, use and disposal.
- Enhance the recognition of the commitment of ETAD members to responsible behavior with respect to health and the environment.



Preface from the President

Dr. Mehmet Emre Şener
(Setaş Kimya Sanayi A.Ş.)

Dear friends of ETAD,

ETAD is an association of leading dyestuff and pigment manufacturers committed to their responsibility to investigate and to control the toxicological and environmental aspects of colourants.

Colourants are a narrow but complex line of chemistry which requires expertise. In its over 40-year long activity, ETAD has been able to gather and, if necessary, create such expertise on colour chemistry, toxicology, environment effects and related legislations, thanks to its professional team and its various committees coming from its member companies.

It is a clear commitment for all ETAD members that our responsibility does not stop at the safety of the colourant manufacturing; it also covers the safe use of colourants in consumer goods, e.g. food contact materials and textiles, as well as the safety of the consumers using those goods. This expert pool of knowledge can also be very useful to the legislators, NGOs, and retail brands who share our concern for the safety of colourants.

During the last years, ETAD has continuously built on its position as recognized competent advisory body. Now, we would like to expand our existing collaboration with retail brands. In particular, during the coming years, we ideally aim to have some retail brands to specify usage of colourants from ETAD members as requisite for their products. A key part of this project is the enhancement of ETAD's visibility as a group of companies which adhere to strict internal rules (our Code of Ethics), and guarantee products compliant with high chemical and ethical standards.

Additionally, we have to consider that there is a growing number of new players in the colourant industry; recognition by the retail brands is very important also for encouraging new companies to join ETAD.

We should explain to NGOs and retail brands that, because of our Code of Ethics, a broader ETAD membership means a safer and cleaner world.

I would like to end this preface by thanking Dr. Hofherr, Dr. Fois, Dr. Xie and Ms. Geary for the great work they have done in the past and also thank them in advance for what they will do in the future.



From the Executive Director

Dr. Walther Hofherr

First of all, I would like to thank my staff at ETAD which did an excellent job, and I always appreciated their high motivation throughout the year. Looking back into 2017 I am very pleased with the outcome of all our activities. I would just like to highlight some of them in the following paragraphs.

In the first half of 2017, ETAD welcomed three new companies as new regular members after they successfully passed the ETAD audit: Matex International Limited, CINIC Chemicals (Shanghai) Co. Ltd from China and Pidilite Industries Ltd. from India.

Thanks to the presence of additional Chinese companies, I am glad to report that, end of April, it was possible to re-establish our Chinese Operating Committee (ChOC). The committee will focus on local activities in contact with regulatory bodies and on all legislation developments affecting the colorant industry. Future committee meetings will be held in Shanghai.

We placed special emphasis on ETAD's Code of Ethics as part of our 2017 activities: for our planned further strengthening of the mandatory requirements, a working group within the Pigments Operating Committee evaluated which residual heavy metals present in pigments should be included in the CoE. Details of this project are described in the POC section of this Annual Report.

Additionally, as part of my important task to enforce ETAD's Code of Ethics, this year I also had to look into the case of an ETAD company alleged to have breached it. A thorough investigation of this case confirmed this allegation; however, the company could show that it had taken the necessary measures to correct all negative findings, and it could maintain the ETAD membership. Our lawyer Dr. Hans-Rudolf Uebersax also followed the case closely and gave me, as always, excellent support, for which I would like to thank him especially in this preface.

Among our various projects with associations/ authorities in 2017, I would also like to underline two of special relevance.

As part of their ongoing collaboration, ETAD and EuPIA (European Printing Ink Association) decided to start a joint project on pigments used for printing inks. The project will be supervised by an ad hoc working group and has the goal to evaluate the possible migration of inks components from printed objects. The results will be the basis for future discussions with authorities as regards requirements for such products in national/ international regulations.

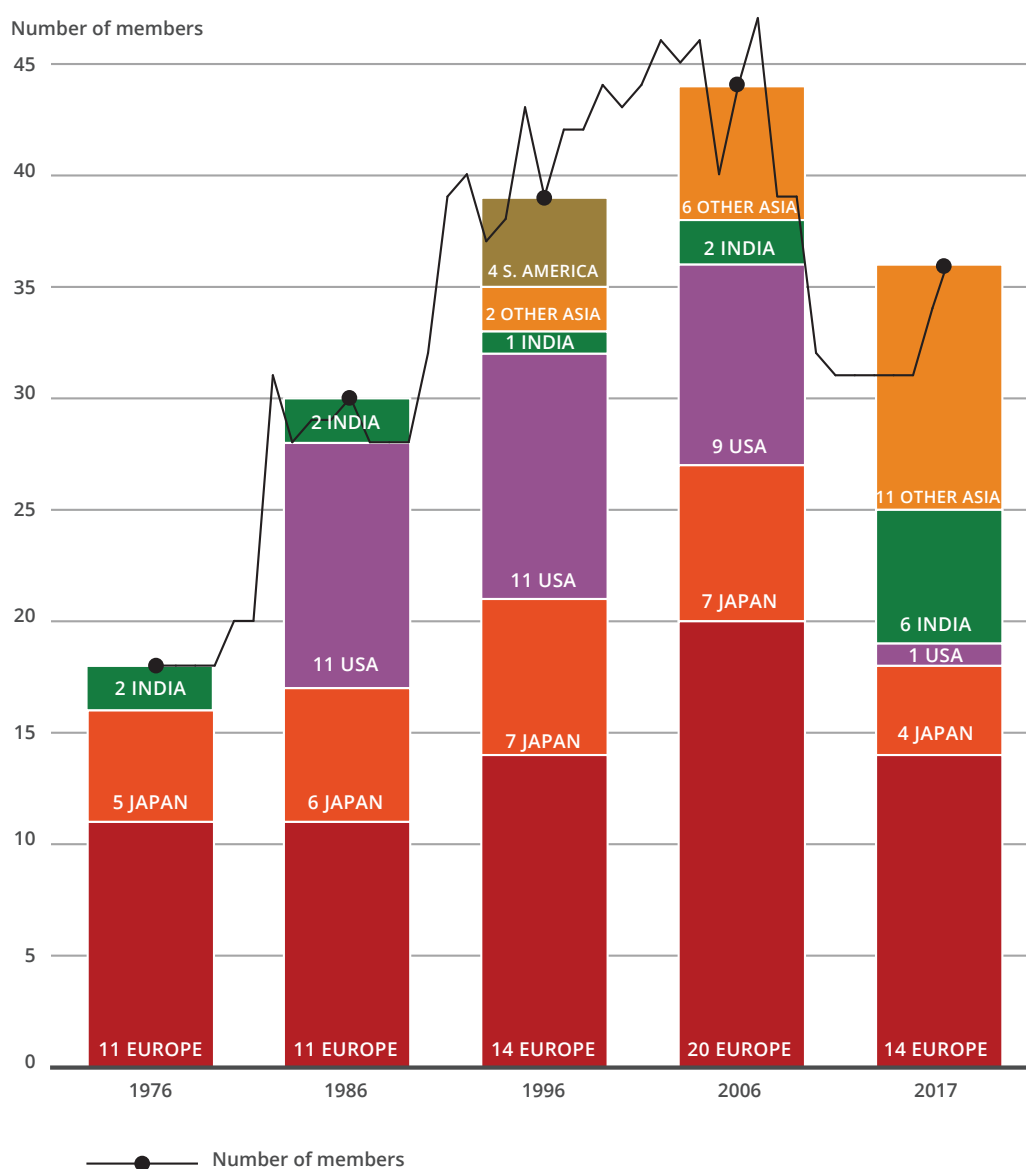
As regards dyes, a discussion took place in November at the German Federal Institute for Risk Assessment (BfR), where the Swiss authorities expressed their concern on the potential risk of non-regulated amines coming from textile/leather dyes. ETAD and TEGEWA presented a proposal for a dyes-based approach to address this concern. In the first phase of the proposed approach, market-related information and available toxicity data will be screened in order to find existing gaps in the safety assessment of dyes which could potentially release one or more of the 40 aromatic amines identified as high priority by the Swiss authorities. BfR highly appreciated this proposal and is pleased that ETAD is a competent discussion partner supporting the German authorities.

Our annual review only gains its value from the interesting reports written by our committee chairmen. So, I would like to thank Frido (RAC), Mark (DOC), Klaus (POC), the JOC's committee members, Tucker (ETAD NA), Dro (ChOC) and Hikari (TOC) for their contributions. ETAD's efforts and the dedication of its members and their affiliates will keep ensuring that our association maintains its reputation as representative of responsible, ethical, and safety-conscious colorant manufacturers.

Membership

Matex International Limited, CINIC Chemicals (Shanghai) Co. Ltd., and Pidilite Industries LTD joined ETAD as regular members in January, March and July 2017, respectively.

Fig. 1 - Growth and changing regional composition of the ETAD membership




Finance

ETAD is a non-profit association. The operating expenses are recovered mainly by means of payments by the ETAD members. In 2017, total income was SFr. 1'069'000 compared with total expenditure of SFr. 995'000, resulting in a profit of SFr. 74'000.

Fig. 2 – Summary of income / expenditure 2000 - 2017





43rd General Assembly and joint meeting

43rd Ordinary General Assembly

The 43rd Ordinary General Assembly of ETAD was held in Dublin on 12 May 2017.

Due to the resignation for health reasons of the President, Dr. Reiner Jahn, the role of chairman was taken over by the Vice-President, Dr. Clemens Grund.

Out of the ETAD membership of 36 companies at the time of the General Assembly, 22 were present or represented by proxy; of the total vote entitlement of 88 votes, 68 votes were represented at the meeting (77%).

The participants approved unanimously the minutes of the 42nd Ordinary General Assembly 2016 as well as the Annual Report 2016.

The treasurer Mr. Roentgen presented the financial report for 2016, which had been sent in due advance to all member companies. In 2016, total income had been SFr. 986'000 compared with total expenditure of SFr. 1'033'000, resulting in a loss of SFr. 47'000. This financial report was approved unanimously.

The Board's proposal for the Budget 2017, also presented by Mr. Roentgen, and the appointment of PriceWaterhouseCoopers AG as auditors for the 2017 accounts were approved unanimously by the General Assembly.

Dr. Grund presented to the Assembly ETAD's main goals for 2017. The active recruitment of new members in Eastern countries will be continued, as well as the collaboration with other associations active in the supply

chain for different colorants applications. Regulatory actions will focus on positive lists for colorants, chemical inventories, and new classifications, for which ETAD's advocacy work is needed. Nano-related activities will continue, as well as the discussion on the additional strengthening of the Code of Ethics, now focussed on organic pigments.

Joint meeting of ETAD Board, DOC and POC members

The ETAD joint meeting is meant as an opportunity for the different committee members and the Board members to have a deeper insight into each other's activities and discuss topics of common interest.

Prior to the joint meeting, Board members also have the opportunity to take part in the specific committee meetings and have a first-hand experience of the committees' work and approach to colorant issues. Additionally, they can directly provide their comments to the committee members on crucial topics which strongly affect the colorant manufacturing industry.

The ETAD joint meeting covered the following main topics:


- Feedback from Board members of their visit in the morning session of the committee meetings
- Chromium approach for dyes and pigments
- CoE: New requirements for pigments
- The new regional committees: ChOC & TOC

The Board proposal for its composition for 2017/2018 was presented to the Assembly. There were no additional nominations in response to the invitation by ETAD Legal Counsel, Dr. Uebersax. The Board was elected unanimously as follows:

Dr. Mehmet Emre Şener
Dr. Clemens Grund
Mr. Georg Roentgen
Dr. Stefan Ehrenberg
Mr. Ravi Kapoor
Dr. Yoshitaka Koshiro
Mr. Peter Krummeck
Ms. Carole Mislin
Dr. Ulrich Veith
Dr. Rüdiger Walz

Setaş Kimya Sanayi A.Ş.
DyStar Colours Distribution GmbH
Huntsman Textile Effects GmbH
BEZEMA AG (now CHT Switzerland AG)
Heubach Colour Pvt. Ltd.
Dainichiseika Color & Chemicals Mfg.
Sun Chemical A/S
Archroma Management GmbH
BASF Colors & Effects Switzerland
Clariant Produkte (Deutschland) GmbH

President
Vice president
Treasurer



Feedback from Board members of their visit at the morning session of committee meetings

C. Mislin, who participated in the DOC meeting, remarked the importance of the committee meetings to tackle a series of topics which affect companies' activities worldwide. For all such topics, the development of common strategies by ETAD is quite important to avoid confusion and uncertainty both in the companies and in the value chain.

R. Walz reported in particular from the POC meeting on the two very ambitious projects which are currently occupying the committee: the ongoing inhalation study and the discussion on mandatory heavy metal limits for pigments. Both projects are proceeding very well and will be especially important to confirm ETAD's position as the reference for the safety of colorants.

Chromium approach for dyes and pigments

After having been discussed in all sector committees, the possibility of a new approach to the evaluation of chromium content in colorants was brought to the attention of all companies' representatives present in the joint meeting.

ETAD has:

- For organic pigments, a recommended total Cr limit (Cr(III) + Cr(VI)) plus a cumulative limit for Cd, Pb, Cr(VI) and Hg.
- For dyes, a mandatory total Cr limit (Cr(III) + Cr(VI)) and a separate Cr(VI) limit.

Although Cr(III) is an essential trace element for the human body and not considered as health hazard, the recommended limits have been including it because of the analytical issues of Cr(VI).

However, recent regulatory activities and standards updates clearly showed the trend of an increasing focus on Cr(VI) alone, and possible specific analytical methods are available. Therefore, ETAD decided to ask its companies whether a change in the existing approach might be advisable and feasible.

All regional committees had given the feedback that an update is necessary; the participants to the joint meeting agreed unanimously with this conclusion. The ETAD office decided to start with the companies a detailed discussion on possible new approaches.

CoE: New requirements for pigments

The participants in the joint meeting were updated on the progress of the discussion on possible mandatory requirements for pigments in ETAD's Code of Ethics. The specific POC Working Group had agreed on the following approach:

- The four heavy metals Cd, Pb, As and Hg were selected based on their toxicological profile
- Chromium is still under discussion
- A precise definition of covered sensitive applications needs to be included
- The amendments of the European Toys Directive (e.g. the lower value for lead approved in 2017) should be considered

The new regional committees: ChOC & TOC

P. Fois gave a quick overview of the newly formed ETAD Taiwanese Operating Committee (TOC) and the re-created ETAD Chinese Operating Committee (ChOC).

Founding members of the TOC are:

- Chroma Chemical Corp.
- Everlight Chem. Industrial Corp.
- T&T Industries Corporation
- Oriental Giant Dyes and Chemical Ind. Corp (OGD)
- OGD will chair the committee, which has its contact address by TDPIA in Taipei (a similar setup as for the JOC).

Amy Huang from Everlight, present at the joint meeting, expressed the intention of the regional committee members to become immediately active on specific topics affecting the local industry. Two issues in particular have already been identified as first action items:

- International Transport Regulations of Dyes
- Sludge limits in wastewater guidelines

As regards the ChOC, founding members are:

- CINIC Chemicals Co. Ltd.
- Hubei Color Root Technology Co., Ltd.
- Matex International Limited
- Yorkshire Chemicals Ltd.

Matex will chair the committee, which will work in close collaboration with the association CDIA.



Dyes Operating Committee (DOC)

While the EU REACH is coming to the end of phase three, other REACH-like programs are just beginning, and precise details on their implementation become more and more important. On the other end, new stringent regulatory/voluntary initiatives provided the DOC with work to do on the development of specific determination methods, the discussion on impurity limits and, last but not least, the input on new possible dyes-related issues.

EU, Turkish and Korean REACH

Although the third REACH registration phase is coming to its end, still some fine tuning on practical aspects is needed, and the DOC offers a platform for the member companies to keep exchanging their experiences and assist each other. On the other hand, much more information is needed as regards other REACH-like regulations, whose status kept changing during the year. The Turkey REACH (KKDIK) was officially published, but many implementation details are still work in progress and, for the moment, quite cumbersome, since e.g. they not allow a simple transfer of the EU-REACH information. The company Setaş is quite active in the Turkish group of industry representatives discussing with the authorities and trying to reach a workable implementation of the KKDIK; DOC questions and concerns can be directly reported to the Turkish authorities.


The Korean REACH, on the contrary, is amending/adding to the regulatory basis of the K-REACH with the goal of making it work as smoothly as possible for the local chemical companies. Through the company Dohmen, the DOC members received also in 2017 clear industry-related updates on the changes and on their practical effects for manufacturers and importers.

Non-regulated amines

During 2017, the Swiss authorities published new results from their evaluation of the possible CMR properties of non-regulated amines related to textile dyes. The publication identified 40 aromatic amines of concern for which further action is required. ETAD and the association TEGEWA immediately started to check the available information both on the amines and on dyes which could potentially cleave to them. Thanks to the competent assistance provided by Dr. Reinhard Jung it was possible to develop a strategy to evaluate the effective concern of the amines, based as far as possible on the information on the dyes. Also important was the conclusion that a complete first evaluation of the chemicals will only be possible after the third REACH registration phase is concluded. The DOC discussed and agreed on the strategy; as a first implementation step, they will provide updated data on the number of dyes related to the 40 amines of concern which are still relevant for the current market.

CMRs in articles

In November 2014, the European Commission started a project for a restriction of CMRs in consumer articles under Art. 68(2), using the "category of articles" approach. The Commission selected textile and clothing articles as a first test case and started collecting information on classified substances that can be present in textile and clothing articles, including their possible maximum concentration limits. A public consultation was launched in the first half of 2015, and the DOC provided ETAD with updated information on dyes-related substances classified as CMR 1A and 1B. Thanks to this input, the number of substances was drastically reduced. In March 2017, a meeting between the EC and the different stakeholders, including ETAD, took place in Brussels, where the relevance of the remaining substances as well as suitable analytical methods and limits were discussed. The DOC provided its input to the final round of comments during the summer; an official restriction text was expected for end of 2017/ beginning of 2018.





Analytical methods

The test method for free cobalt in complex dyes, developed as a result of DOC initiative was finalized and is available to ETAD members.

More recently, following the agreement reached during the General Assembly in Dublin, the DOC members appointed an ad-hoc working group of analytical experts from their companies (see box) to address the determination of chromium(VI), with initial focus on dyes. The final results of the first comparison tests using three different detection methods were submitted end of 2017 and will be discussed by the Analytical Experts Group in 2018.

ZDHC

Beside authorities, the other most important stakeholder the DOC is confronted with are the retailers and brands. The planned consolidation of diverging reporting requirements into a harmonized ZDHC MRSL has not taken place yet. This challenging project has now been allocated to the newly formed MRSL Advisory Group (MAG), which had its face-to-face kick-off meeting end of December 2017 in Amsterdam. The group is composed of different stakeholders, each of them having a single vote (ETAD and TEGEWA are members and share a vote). The MAG will also decide on new substances to be included in the MRSL.

ETAD's visibility

The DOC strongly supports ETAD's involvement with other stakeholders and assistance in their scientifically based programs. However, the committee also stresses the importance for the association to develop further on its brand equity, among the retailers and brands in the first place and in industry as well. The communication of the ecological advantages and the sustainability of ETAD's member companies must be enhanced. ETAD will make this one of its main goals in 2018.

Dyes Analytical Expert Team members

Ms. Hikari Chiu	Oriental Giant Dyes & Chemical Ind. Corporation
Dr. Oszkar Keray	CHT Switzerland AG
Mr. Peter Laubner	DyStar Colours Distribution GmbH
Dr. Thomas Otten	Huntsman Textile Effects
Mr. Ismail Yakın	Setaş Kimya Sanayi A. Ş.



Pigments Operating Committee (POC)

In 2017, the most important topic of the POC was the discussion on the inclusion of mandatory impurity limits for pigments into ETAD's Code of Ethics (CoE). The effect of the nano debate on organic pigments remained a relevant topic as well, along with the use of pigments in sensitive applications, including test methods for regulatory purposes and activities related to planned regulatory changes.

REACH

ETAD continued to serve as a platform for lead registrants. After the second-tier submissions of dossiers the POC focussed on transparent assessment and communication to authorities of nano properties of pigments. The status of the registrations is monitored and specific topics (e.g. particle size, particle size distribution, measurement methods or evaluation trends) are addressed in order to get a common industry position. Especially the expected change of the REACH annexes as well as the development of a new REACH guidance related to nanomaterials or an upcoming discussion about the bioavailability of organic pigments gains increasing importance (see also next section).

Nano

Nano continued to be one of the central topics of 2017. NanoDefine, an EU funded project to develop measurement methods to prove the nano materials definition, was finalised in November and the results were presented to the different stakeholders, including industry, for revision. Nevertheless, available data still suggest that most of the pigments should be considered as nanomaterial.

Five major topics potentially impacting organic pigments were carefully followed in 2017.

- The adaptation of the REACH annexes: After harmonizing discussions between DG Grow and DG Environment a public consultation regarding the adaptation of REACH annexes related to nanomaterials took place. The results are being reviewed.
- The review of the nanomaterial definition: the process is still ongoing.
- The development of a nano related REACH guidance by ECHA: Due to the slow progress related to the REACH annex adaptation and the nanomaterial definition review as well, ECHA developed a new REACH guidance related to nanomaterials.
- The development of measurement methods to prove the definition: Easy and readily available measurement methods to prove that a powdered material is not a nanomaterial are still missing.
- The implementation of national nano product registers: The registration requirement for mixtures into the nano product register in Belgium was postponed starting in January 2018.

An important task of the POC is monitoring not only the nano activities in the EU, but also outside of it. In this context the committee followed the discussions on a possible EPA reporting rule for nano materials. Additionally, the POC commented on a draft regulation foreseeing extensive registration requirements for nano materials published by the Swiss Authorities, the communication with the authorities resulting in a limitation of the affected nanomaterials.

General communication with authorities and a close industry cooperation including downstream users continued to be an important lobbying activity for pigments as nanomaterials. An update of ETAD's nano position paper reflecting the actual status is also in preparation.



Sensitive applications

Toy safety

Even with the toy safety standard in force, ETAD continued the monitoring of possible developments; in particular, a request for the amendment of the test method for chromium is undergoing the official procedure. If the request is accepted, ETAD will become active again in the corresponding ISO Working Group.

Food contact legislation

In 2017, the development of legislation on printing inks came to a crucial point: The German authorities agreed on freezing their draft printing ink ordinance in favor of activities on a European level started by the European Commission. However, it is still not decided which of the two projects will be carried on eventually. In the meanwhile, ETAD continued the cooperation with EuPIA to evaluate the opportunity for a common approach for its affected products, firstly focusing on the migration of two representative pigments; the results of this project will be important independently on the final issuer of the regulation.

Plastic additives

ETAD companies and particularly POC members are co-operating with ECHA through Eurocolour and provided information to the project on a Plastic Additives Inventory, started in 2017. ETAD's specific goal is to achieve, an adequate representation and a proper assessment of pigments in plastics.

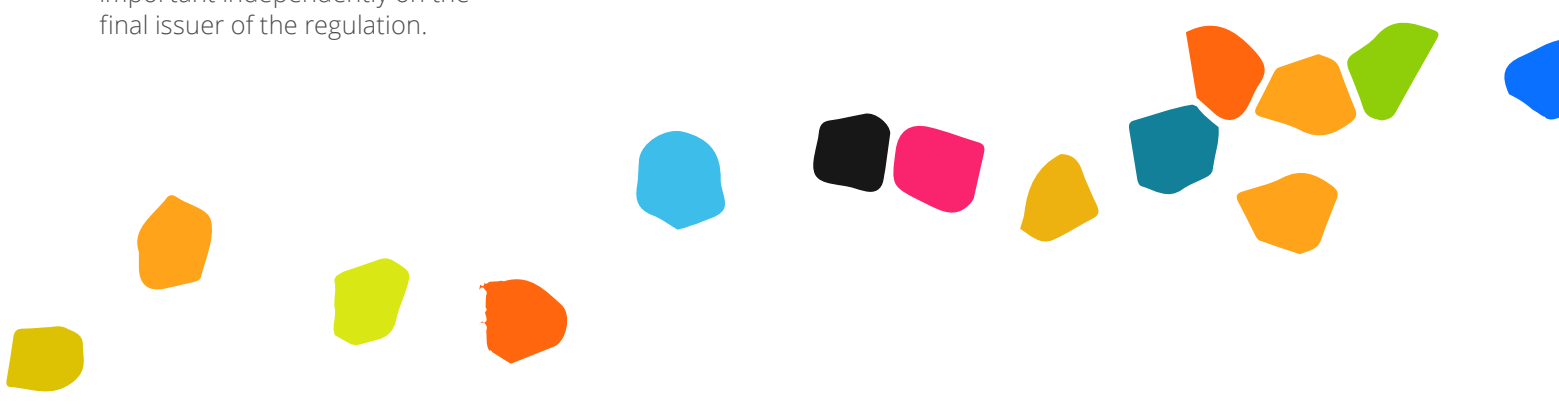
Standardization

ETAD continued its activities in the ISO technical committee TC 256 (pigments and extenders), participating in following working groups: 1) terms and definitions, 2) functional pigments and 3) general test methods.

As a result of these activities the assessment method for PCBs (ETAD method 229) is now under revision as ISO/CD 787-28.

Further activities

Along with the main topics listed above, in 2017 the POC carefully reviewed other developments which could directly or indirectly affect the organic pigments' status. In particular, the committee monitored the results from PCB analyses from the environment as well as various regulatory news relevant for organic pigments (e.g. the impact of the potential classification of titanium dioxide on other substances used as powders, the new German classification "AwSV" or the renewal of TSCA, also known as "Lautenberg Act"). Whenever possible, the POC also discussed appropriate measures and corresponding advice for the ETAD members.





Regulatory Affairs Committee (RAC)

The representatives of the six member companies of the RAC met three times in 2017 to exchange information about new regulatory developments and interpret the impact of emerging and changing global and national legislation. The most relevant changes in regulations which affected colorants during the year are summarized below.

REACH and REACH-like legislation

EU

In November 2017, ECHA published a list of 149 substances that might be chosen for compliance checks. This list is only indicative and not exhaustive, i.e. ECHA may at any time open a compliance check on any dossier to verify if the information submitted by registrants is compliant with the legal requirements without prior notice to the registrants.

ECHA requests registrants to review by 16 February 2018 their corresponding registration dossiers and update them with any new and/or relevant information including, where applicable, an update of the CSR and change of the tonnage band.

On the CORAP list there are now 337 substances, including the two pigments Pigment Orange 5 and Pigment Red 53:1.

UK and Brexit

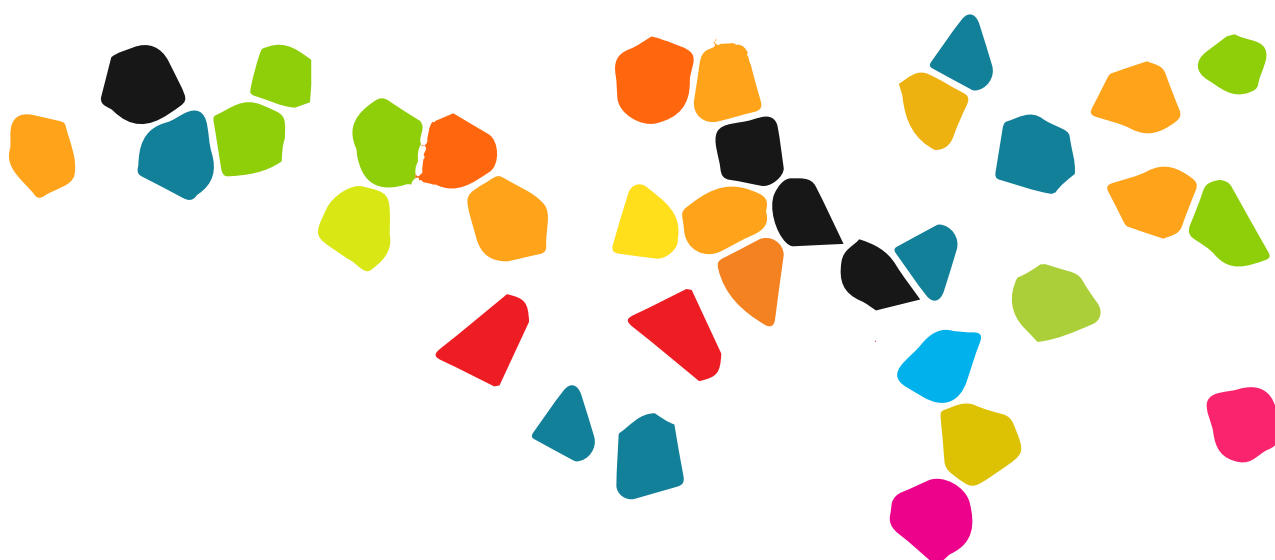
Companies in the UK and companies selling or importing products to the UK may face complications following the Brexit, because of the changed status of their REACH registration. A positive approach would be that if a substance is registered under EU REACH, the substance is also automatically registered under UK REACH; the chemical industry in the UK is currently advocating for this solution. An "UK REACH" is planned, but no details have been communicated yet. Additionally, UK authorities/ministries are in negotiation with ECHA about the use of data - and also about the costs for data sharing. Otherwise double costs would incur for UK companies and for EU companies importing to the UK.

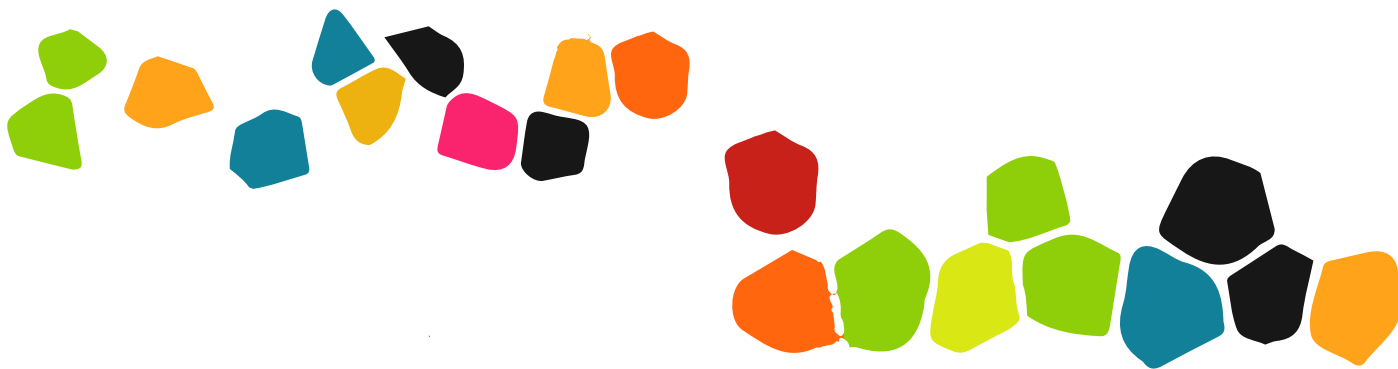
K-REACH

So far, 510 priority existing chemicals (PECs) must be registered until 1 July 2018 as long a legal entity is manufacturing or importing regardless of the tonnage band. All existing chemical substances manufactured or imported in quantities from 1 tonne per year will require registration.

Non-PEC substances have progressive registration deadlines depending on their CMRs properties and tonnage, going from 2021 to 2030.

Data requirements will also depend on tonnage bands and GHS classifications. For substances which are not classified as hazardous according to GHS, required data can be significantly reduced.





Taiwan

The currently ongoing Phase 2 registration affects companies which manufacture/import PECs (Priority Existing Chemicals). PECs have been designated by the competent authority as a high priority in a tiered approach based on risk and therefore are required for rigorous "standard registration".

The first batch of registrations of toxic chemicals on promulgated lists of priority and designated toxic chemicals will take place from the beginning of 2018 through 2021, followed by the second batch of registrations from 2021 through 2024 and the third batch of registrations from 2024 through 2027.

GHS-related developments

In August, the **UN** published the seventh revision of its Globally Harmonized System of Classification and Labelling of Chemicals, popularly known as the purple book.

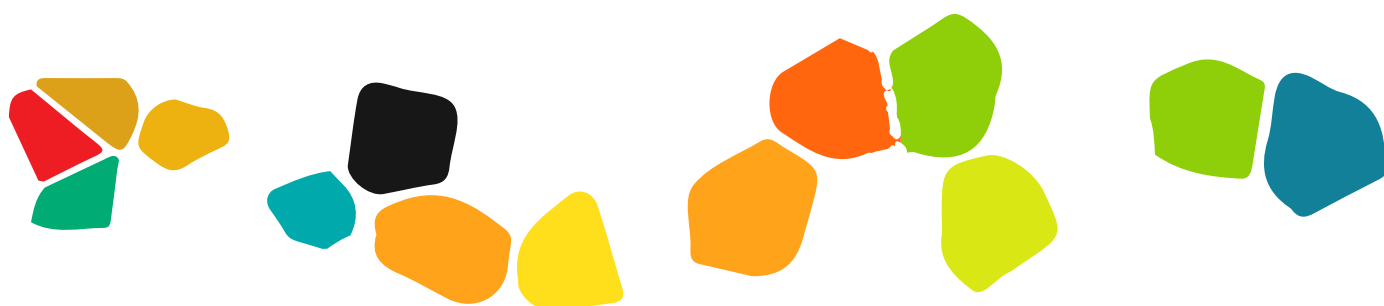
The **EU** Commission amended the CLP regulation by adding a new Annex VIII on harmonized information relating to poison centers for emergency health response.

Manufacturers will be required to list the Unique Formula Identifier (UFI) on the product label.

The CLP transition period for mixtures ended on 1 June 2017. As of 1 January 2020, the regulation will apply to hazardous mixtures supplied to consumers. As of 1 January 2021, it will apply to hazardous mixtures used commercially. And as of 1 January 2024, it will also apply to hazardous mixtures used industrially.

In **Japan**, a new list of officially classified substances by relevant ministries was available in October 2017. The list contains more than 3800 substances. Classification was conducted in accordance with GHS Classification.

In **Colombia**, all manufacturers and/or importers of industrial chemicals are requested to classify and identify the hazards of the substances according to GHS. The deadline for registration is January 2020.





Nanomaterials

In January 2017, the **US** EPA finalised its nanoscale materials reporting rule, which will require one-time reporting for existing nanoscale materials and for new discrete nanomaterials before they are manufactured or processed.

The agency says it will not develop an inventory of nanoscale materials based on the reporting.

As confirmed by the RAC members, the US definition of nanomaterials, unlike the EU one, does not affect organic pigments, since they do not “exhibit one or more unique and novel property” at the nanoscale.

Mid-June, ECHA launched its **EU** observatory for nanomaterials (EUON), a public website aimed at increasing transparency of information on nanomaterials on the EU market.

As a first step, ECHA has collected existing data on nanomaterials on the EU market, such as where they are used and their potential health and safety issues. The platform also hosts information on how they are regulated in the EU and other jurisdictions, and on some relevant ongoing research projects.

In **Switzerland**, the final version of the Swiss Chemical Ordinance, including requirements for nanomaterials, was published and will come into force 1 March 2018. Pigments do not fall under the definition and reporting obligations for nanomaterials.

In **Germany**, the working group AK BekGS 527 proposed during a meeting with representatives from the AGS (Ausschuss Gefahrstoffe) to implement the new dust limit solely for “technically intentionally” manufactured nanomaterials; pigments would no longer fall under this new limit. The proposal was accepted and will be discussed during the AGS meeting in May 2018.

Food contact materials (FCMs)

In 2017, some quite important developments with FCMs had a specific impact on colorants.

EU

The ongoing development of the **German Printing Ink Ordinance** (PIO) triggered the start of an EU-wide action on printed food packaging, whose outcome is still unclear (see the POC report for details).

For plastic materials, the European Plastic Implementation Measure (**PIM**) was amended for the 8th time through Regulation 2017/752/EU. The main impact for colorants is the new migration limit for Nickel = 0,02 mg/kg in the final food package.

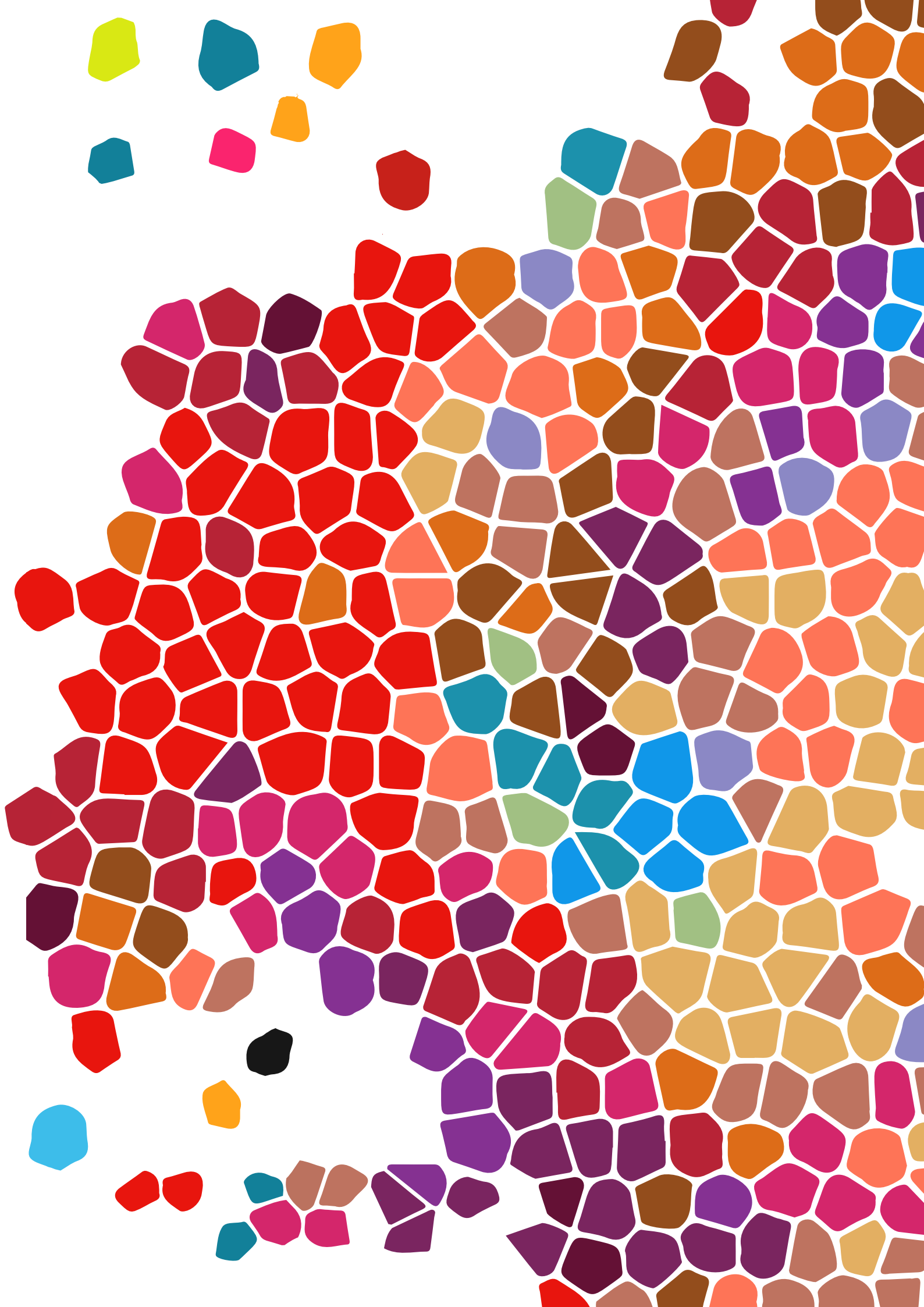
ECHA's project on a **Plastic Additives Inventory**, started in 2017, concluded its first phase. The aim of this project is to ensure that there is adequate information, particularly on use and exposure, for ECHA to distinguish the substances used as plastic additives which warrant being prioritised for further regulatory risk management from those which can be deprioritised for the moment.

ETAD's contribution to the inventory was provided by the POC (see also corresponding report).

China

GB 9685-2016 and GB 4806.1-2016 (Food safety standard - General requirement on food contact materials) came into force in October 2017.

The main change of GB9685-2016 is the Annex A, which contains permissible Additives in Food Contact Materials in the revised lists A1-A7 (plastics, coatings, rubbers, printing inks, adhesives, paper, and other, respectively) as well as products and use requirements.



ETAD North America (ETAD NA)*



ETAD maintained a presence in North America through its ETAD North America (ETAD NA) office in the Washington, DC area. In January, the office moved to a new location in Arlington, VA. Representing the global dyes industry, ETAD NA continued to be recognized by government agencies, industry groups and trade associations, customers, media, academic and research organizations, and the public as the authoritative voice of the industry in North America. In coordination with the ETAD headquarters office in Basel, ETAD NA served the North American member companies by monitoring regulatory and industry developments, managing technical projects, facilitating networking opportunities, and disseminating information concerning the environmental, health and safety aspects of the North American dyes industry.

U.S. Toxic Substances Control Act (TSCA) legislative and regulatory developments

Under the new U.S. Toxic Substances Control Act known as the Lautenberg Chemical Safety Act, EPA issued two rule makings of interest to the dyes industry: (1) prioritizing chemicals for risk evaluation and (2) the process for risk evaluation. ETAD NA submitted a letter of comments on the rules. A third rule, updating the TSCA Inventory, was finalized separately. The U.S. chemical industry is engaged in litigation to defend the prioritization and risk evaluation rules, and also to support the inventory reset rule to prevent further disclosure requirements at the expense of protecting confidential business information. The LCSA amendments to TSCA would allow collection of fees for PMNs, but implementation of this provision is still under development.

In a separate development, the U.S. Occupational Safety and Health Administration (OSHA) was to consider possible changes in the Voluntary Protection Program which would implement a management system.

California Safer Consumer Products Regulation

Few developments under California's Safer Consumer Products Regulation had direct impact on the dyes industry. ETAD NA continued to monitor developments and reviewed the State's Guideline for Alternative Analysis which contained approaches for developing alternatives including removal of a chemical of concern, reformulating or redesigning a product to reduce the chemical of concern, and redesigning a product to reduce exposure. Version 1.0 of the guidelines was published in June 2017.

Product categories under review in 2017 included chemicals in nail products and children's foam-padded sleeping products. In October, the State published the 2018-2020 priority product work plan seeking public input on product categories to evaluate.

ETAD NA will continue to monitor developments as California proceeds with its work plan.

Regulatory developments in Canada

Update of the Canadian Domestic Substances List (i.e. Inventory Update) continued in 2017. A list of approximately 1500 substances was proposed for the 2017 inventory through Section 71 notices.

Under Phase 3 of the Chemicals Management Plan, anthraquinone and related dyes are being reviewed. ETAD NA provided relevant information on commercial importance and available toxicity and environmental information. Stilbenes, including fluorescent brighteners, were also planned for review. ETAD NA provided copies of studies conducted for EPA's HPV program. ETAD NA has been represented in recent multi-stakeholder discussions about the next steps for the CMP leading to 2020.

ETAD NA submitted comments to Environment and Climate Change Canada on the proposed risk management approach for Disperse Yellow 3. The Canadian authorities are reconsidering the approach in light of new information.

A Canadian Parliamentary Review Committee has issued a report on

** Starting from March 2018, ETAD NA will refer directly to the Basel office, with Pierfrancesco Fois as new ETAD NA Executive Director. Richard Bidstrup will remain the legal counsel for all North America-related activities.*



its review of the Canadian Environmental Protection Act (CEPA). The Industry Coordinating Group (ICG) has been managing industry efforts (including ETAD NA) to respond to the report.

ANSI voluntary Sustainable Textiles Standard

There were no developments in 2017 under the Sustainable Textiles Standard that impacted ETAD NA members.

Sustainable Apparel Coalition

ETAD NA continued monitoring this group of leading apparel and footwear brands, retailers, manufacturers, NGOs, and the EPA who are working together to reduce the environmental and social impact of apparel and footwear products sold around the world. No new developments were reported.

Manufacturers Restricted Substances Lists (RSLs)

ETAD NA continued to support the global ETAD efforts to collaborate with Zero Discharge of Hazardous Chemicals (ZDHC) in developing the Manufacturers Restricted Substances List and achieving recommended limits to impurities. Related to that, members were made aware of the WERCS system being implemented by the UL laboratories. This is similar to the ZDHC Chemical Gateway database which can help dye houses select products.

Voluntary Product Environmental Profile (VPEP)

The Voluntary Product Environmental Profile (VPEP) has continued to be used for providing health and safety data on chemicals supplied to the U.S. textile industry. It may be accessed online at <https://vpepexchange.com/>. ETAD NA was not aware of any new developments.

Residual dyes in containers

A schematic of the test plan and compilation of data from customer facilities were refined for a presentation to the EPA. The purpose of meeting with EPA is to demonstrate actual residual concentrations that are well below EPA's default values of 1% for powder and 3% for liquid dyes. It is hoped to correct the unrealistic default assumptions used by the Agency in its new chemicals program when considering the amount of residual dye remaining in empty containers. A meeting with EPA was confirmed for early in 2018.

Coordination with CPMA

The Executive Directors of ETAD NA and the Color Pigments Manufacturers Association (CPMA) continued to implement cooperation between the two organizations through information exchange and joint attendance at selected meetings where appropriate.

Chinese Operating Committee (ChOC)

The ChOC (Chinese Operating Committee) was established 12 years ago; however, its activities were discontinued after a short period of time. As the colorant industry has experienced many fundamental changes worldwide in the last 10 years, in particular the transfer of dyestuff manufacturing bases to Asia, especially to China, the right time came to re-establish ChOC.



In conjunction with the 17th China Interdye 2017, a pre-meeting of ETAD's Chinese member companies was held in April 2017 to prepare the re-establishment of ChOC. The participating members from four ETAD members based in China highly supported the idea and unanimously agreed to start the committee's activities again as soon as possible.

The 1st ChOC meeting was held successfully on 31 October 2017 in Shanghai, China. The founding ChOC members, currently from six ETAD companies based in China, are motivated and confident to continuously grow ChOC's membership base in the future.

The ChOC will focus on local regulatory issues related to colorant industry as well as collaboration with other stakeholders and associations.

Acquisition of new ChOC members

A particular task of the ChOC is to support ETAD in recruiting more ETAD members. At the 1st ChOC meeting, the participants put together several proposals about how to achieve this objective, e.g.

- Close collaboration with CDIA (China Dyestuff Industry Association) and CNTAC (China National Textile and Apparel Council) to increase exposure of ETAD to their members;
- Collaboration with brands and retailers (e.g. ZDHC) and benefit from their influence to increase the awareness and attractiveness of ETAD along the supply chain;
- Enhancement of the ETAD/ChOC's importance and visibility by advertisement, sponsorship etc;

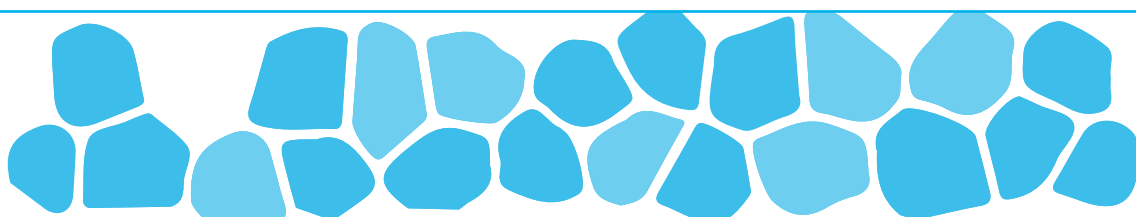
- Development of direct relationship with authorities like MEP (Ministry of Environmental Protection).

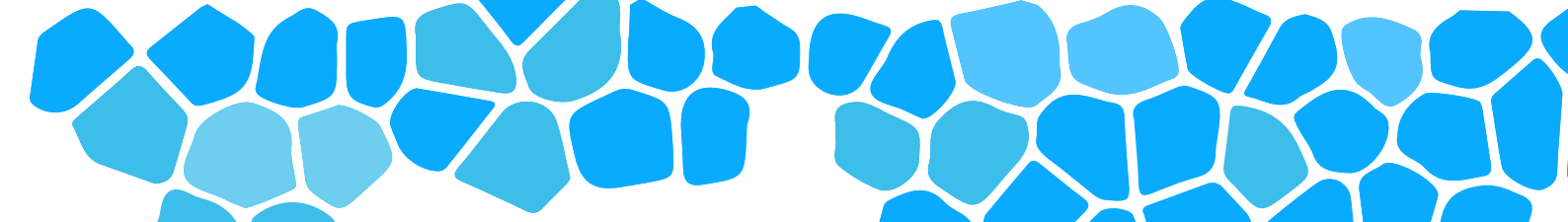
ChOC is going to work out an implementation plan on the basis of these possible approaches.

Regulations and standards

Another important task of the ChOC is to get involved in the development of new regulations and standards.

Before the re-establishment of the ChOC, ETAD had identified an opportunity to be involved in the China National Standard (GB) project setting wastewater discharge limits for dyestuff production sites. The Ministry of Environment Protection (MEP) assigned this project to three parties, CDIA being one of them. It





would have been an ideal project for ETAD to show its recognized scientific expertise and international experience. Additionally, it would have enhanced its presence in China and opened the way to further involvement in other GB standard projects as well. The original intention of CDIA to get ETAD involved, however, was not accepted by the other two parties due to different opinions.

Nevertheless, the ChOC will continue looking for other opportunities for getting involved in local legislation processes.

Collaboration with other associations/stakeholders

CDIA will celebrate the 100th anniversary of China's dye industry in 2018, and will organize an event in April 2018. The ChOC will take this opportunity to increase its exposure to CDIA's members and the whole industry as well. The committee is planning to contribute with a presentation to the planned seminar.

The ZDHC group is currently active in measuring effective discharge values on-site of some selected dyeing and finishing plants in China. At the 1st ChOC meeting, the participants compared and discussed the discharge standard between ZDHC and China's

National Standard GB 4287-2012. Two major issues were identified:

- The test method for aniline compounds (GB 11889-89), which is reportedly difficult to be implemented. For the time being, nothing can be changed, as the Standard is already legally in force.
- The target limits in ZDHC Waste Water Guidelines are much lower than those laid down in the applicable Standard GB 4287-2012 and even lower than in other international guidelines. This discrepancy would lead to difficulty in implementation of ZDHC Waste Water Guidelines. The ChOC considers that there is a need to work together closely with ZDHC to address this issue.

Japanese Operating Committee (JOC)

The Japanese Operating Committee has been operating since its re-activation in 2010 and monitors the regulatory situation for pigments and dyes in Japan. The committee is formed by representatives of six ETAD member companies present in Japan and works in close communication with the ETAD office in Basel. For the past few years, the JOC held an annual joint meeting with ETAD's Executive Director Walther Hofherr. During this year's meeting in Tokyo, Walther Hofherr presented ETAD's recent activities on key issues for global regulations for pigments and dyes to JDICA (Japan Dyestuff and Industrial Chemicals Association) in form of a seminar.

PCBs reporting scheme

By March 2018, manufacturers and importers of organic pigments must inform the Japanese authorities about the unintentionally added PCB content in their products by submitting an annual report for 2017. To help the industry, the JOC, in collaboration within JDICA, prepared guidelines for the preparation of the PCB annual report for 2018 and presented them to the Ministry of Economy (METI). In particular, the JOC proposed a certain degree of discretion in the changing of some control measures, so that it could be done without permission from authorities. METI is discussing the draft guidelines with the Ministry of Environment (MOE) and the Ministry of Health, Labor, and Welfare (MHLW) before giving a final opinion on their suitability.

Amendment of the Industrial Safety & Health Law (ISHL)

In August 2017, the Japanese Ministry of Health, Labor and Welfare (MHLW) announced the amendment of the Industrial Safety & Health Law (ISHL) about the substances indicated on the label and notified in SDS.

- The range of silica substances are changed from total silica to crystal silica only (Implementation Date: 3 August 2017)
- 10 chemical substances are added to the list (Implementation Date: 1 July 2018)

Amendment of the Chemical Substance Control Law (CSCL)

In June 2017, the revised CSCL was published by METI and will enter into force on 1 April 2019. Importers of chemical substances have to comply with the CSCL. The same threshold of 1 t/a per imported substance is applying for notification. Importing a chemical substance of 1 t/a or more into Japan requires notification with data under CSCL. However, low volume notifications (LVE) for <1MT and <10MT are to change the limit from the total quantity placed on the Japanese market per year to a total environmental release per year, using emission factors established for various uses. These factors will be defined for each usage category by Japanese authorities in June 2018. This could lead for example under the Small Quantity Exemption category to each company being able to manufacture or import up to 1MT/a as long as the total emissions do not exceed 1MT for the whole of Japan.

The JOC expects as relevant part of their activities in 2018 the review of guidance documents for the revised CSCL as well as the discussion on updated legislation on FCM in Japan.

Information exchange between JDICA and the ETAD offices

During the yearly meeting with JDICA, W. Hofherr provided updated information about the development of analytical methods for the determination of cobalt in complex dyestuffs and for the determination of Cr (VI) in dyestuffs. Furthermore, the development of ETAD's inhalation studies on pigments was discussed. He also communicated the status of ETAD's PCBs method and its ISO implementation. On the topic of ETAD's collaboration with other stakeholders, W. Hofherr reported about ETAD's activities in the ZDHC group, the collaboration with the Swiss authorities on "non-regulated amines", and the German discussion on the new water hazard classification of diarylide pigments.

Nanomaterials regulatory situation

In Japan there are still no laws or ordinances which directly regulate nanomaterials. Besides, there was no progress with respect to nanomaterial and its restrictions in 2017. However, the status of the discussion has to be checked regularly so that the JOC can react immediately to possible regulatory updates.



Taiwan Operating Committee (TOC)

The TOC monitors worldwide chemical regulations that impact Taiwan's dyestuffs and pigments industries and works closely with the Taiwan Dyestuffs and Pigments Industrial Association. The committee has a constant information exchange with the ETAD office in Basel.

ZDHC

The activities of the Zero Discharge of Hazardous Chemicals group had an impact on various aspects of the colorant industry in Taiwan. In detail:

2016 Water Guidelines

The detection of harmful substances in sludge in the ZDHC Wastewaters Guidelines 2016 is for tracking and limiting the use of restricted chemical substances; however, the corresponding limits are different from the ones defined in Taiwan's Enterprise Waste Determination Criteria (5 June 1998). Additionally, the two systems are using different analytical methods. For example, ZDHC suggests using an acid digestion method for common heavy metals (measured as total metals) whereas the Taiwan Enterprise Waste reference uses the Toxicity Characteristic Leaching Procedure (TCLP) with a dissolution method. The TOC members are checking how to communicate this issue when referring to their products.

ZDHC Gateway Chemical Module

The Gateway, officially launched in 2017, provides a rating of a chemical's conformance with ZDHC's MRSL. The companies in the TOC are checking the effect and opportunities for their products, considering that the rating involves a third-party certification.

Notified ECHA updated guidance of non-animal test for allergenic disperse dyes

The Guidance was carefully evaluated by the TOC, whose companies are internationally active and therefore also affected

by the REACH registration duties. Additionally, the discussion on allergenic disperse dyes is an ever recurring topic and new possibilities for their evaluation have to be carefully reviewed.

Vietnamese first draft of National Chemicals Inventory

In April 2015, the Vietnam Chemicals Agency Vinachemia, together with the Vietnamese Ministry of Industry launched a project aimed to strengthen the chemicals management program, to develop Vinachemia's short-range and long-range action plans, and to build a list of national chemical substances and databases. On 15 March 2017, as part of this program, the second edition of the list of national chemicals was published. The project will end in February 2018. The TOC keeps following the development of Vinachemia's updating and its effect on the import of colorants into Vietnam; additionally, TOC will share any new information to all other ETAD members through the Basel office.

Taiwan

Taiwan GHS Standards: CNS 15030 Classification and Labelling of Chemicals

Since 2006, Taiwan has promoted the GHS through an inter-ministerial workshop. In 2008, the implementation of the GHS classification label and MSDS was carried out in phases. A specific issue for colorant manufacturers is that following the main national standard for chemical classification and labelling in Taiwan (CNS 15030) some dyestuffs and pigments were

classified as environmentally hazardous dangerous goods. As a consequence, air cargo companies are reluctant to ship these colorants, while in case of ocean freight shipments, the carriers accept the classified colorants as container yard cargo, but usually not as bulk cargo. The TOC is trying to find a way to solve this issue.

Taiwan chemical inventory of existing chemical substances

EPA announced the first batch of existing chemical substances as a draft list of 122 chemicals, which was published for public comments. As a following step, the authorities scheduled to launch a registration process in 2018. The expected registration requirements are:

- Basic identification of the registrant and substances
- Substances manufacture, use and exposure information
- Hazards classification and labelling
- Safe use information
- Physical and chemical properties
- Toxicological information
- Ecotoxicological information
- Hazard assessment
- Exposure assessment

The TOC contacted the national authority EPA's TCSB (Toxic and Chemical Substances Bureau at the Environmental Protection Administration) and held a meeting with a Deputy General Director, during which they provided their input on the 122 listed chemicals.

Information and external activities

Presentations and publications

Comments on EPA's Proposed Procedures for Prioritization of Chemicals, and for Risk Evaluation, under the Amended Toxic Substances Control Act. U.S. Environmental Protection Agency, March 2017.

Highlights on worldwide development trends in 2016 on regulations related to colorants Article published in CDIA's China Dyestuff Industry Annual 2016, March 2017.

Disperse Yellow 3 and Azo Consultation Document. Environment and Climate Change Canada, May 2017.

ETAD activities update Presentation at Eurocolour's General Assembly 2017, Maranello, July 2017.

ETAD Comments on CEPA and CMP Review by the House of Commons Committee on Environment and Sustainable Development. Submitted to Industry Coordinating Group (Canada), August 2017.

Request to oppose the authorization of sodium dichromate in mordant dyes processes Letter to ECHA, DG Environment and DG Grow, September 2017.

Consumer Awareness & Safety of Organic Pigments Presentation at the Pigments and Colours Science Forum, Alicante, October 2017.

Follow up on recent publications on genotoxicity data of aromatic amines

Presentation prepared in collaboration with TEGEWA for the 5th Meeting of the „Textile and leather“ group of the BfR commission for consumer goods, Berlin, November 2017.

Anilin in Textilien Presentation at the 5th Meeting of the „Textile and leather“ group of the BfR commission for consumer goods, Berlin, November 2017.

ETAD focus 2017 Presentation to JDICA, Tokyo, November 2017.

ETAD Highlights Bi-monthly information leaflet for ETAD members

ETAD's brochure Detailed overview on ETAD's structure, membership and current activities, regularly updated and distributed at external events (in English and Chinese)

ETAD's Chinese leaflet 4-pager on ETAD's structure, membership and current activities, regularly updated and distributed at external events (in Chinese only)

New ETAD Method

ETAD Method 230 - Determination of Extractable Cobalt in Dyes by Polarography, July 2017

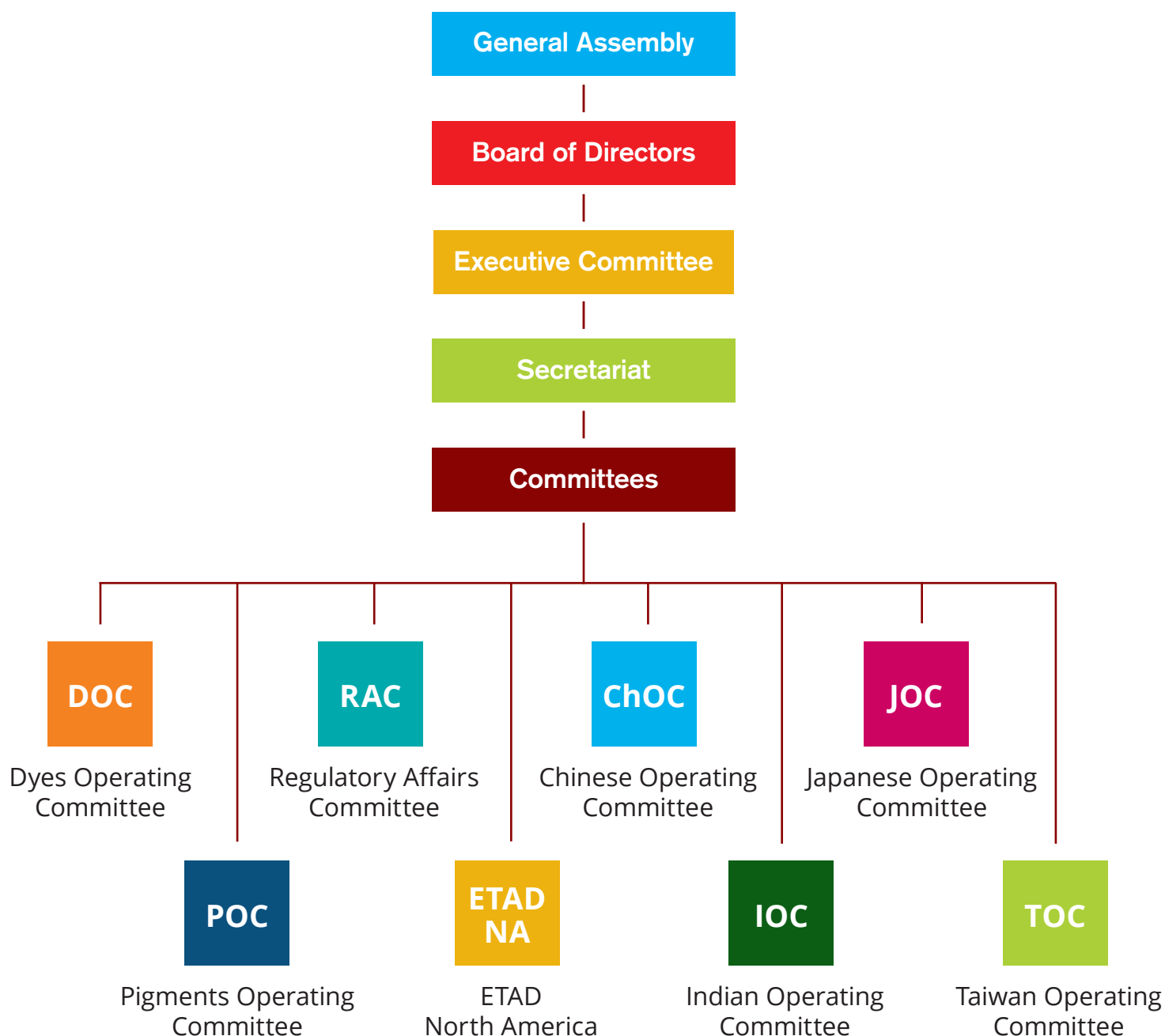
External activities

During 2017, ETAD continued or started its activities in different projects with external groups and associations. The most relevant collaborations included:

- Participation in the Zero Discharge of Hazardous Chemicals (ZDHC) group as representative of the colorants manufacturers in different Focus Areas and in the MRSL Advisory Group (MAG)
- Participation in ISO groups dealing with pigments standards
- Discussion on residual dyes in containers with the US EPA
- General input to the nano debate and corresponding national and international activities
- Input to the EU Commission project on CMRs in textiles
- Collaboration with EuPIA on organic pigments in printing inks
- Input to ECHA on the authorization of dichromates for after-treatment of dyed textiles
- Participation in the Colour Index Pigments and Solvent Dyes Technical Board

Further information on the most relevant topics can be found in the single committees' reports.

Organisation chart



Board*

Committee members*

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Dr. Mehmet Şener
Setaş Kimya Sanayi A. Ş.

Vice President

Dr. Clemens Grund
DyStar Colours Distribution
GmbH

Treasurer

Mr. Georg Roentgen
Huntsman Textile Effects

Dr. Stefan Ehrenberg
CHT Switzerland AG

Mr. Ravi Kapoor
Heubach Colour Pvt. Ltd.

Dr. Yoshitaka Koshiro
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Chemicals Mfg.

Mr. Peter Krummeck
Sun Chemical A/S

Ms. Carole Mislin
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GmbH

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(Deutschland) GmbH

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M. Dohmen GmbH

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Setaş Kimya Sanayi A.Ş.

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Ms. Carole Mislin
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* These lists give membership as in March 2018

Code of Ethics

Preamble

The aim of ETAD is to minimize possible negative effects on health and the environment arising from manufacture and use of synthetic organic colorants and to ensure information on the best practicable protection is provided to the purchasers of these products.

To achieve this goal and to promote the image of a responsible and safety minded manufacturing industry, it is necessary that in all aspects related to human and environmental safety, members be encouraged to adhere worldwide to a high ethical standard.

Therefore, at the proposal of the Board, the General Assembly of ETAD approves this Code of Ethics as a key policy of the Association. All ETAD member companies are obliged to comply with this Code of Ethics.

1. Principles of responsible care

ETAD members are committed to support a continuing effort to improve the industry's responsible management of synthetic organic colorants. Members shall develop, produce and distribute products in a responsible manner which protects human health and the environment from unacceptable risks during manufacture, transport, use and disposal. Specifically, members shall implement a responsible care program in which the member undertakes to manage its business in accordance with the following principles:

- To recognize and respond to any community concerns about synthetic organic colorants and its manufacturing operations;
- To produce only synthetic organic colorants that can be manufactured, transported, used and disposed of safely;
- To make health, safety, employee training, quality assurance and environmental considerations a priority in planning for all products and processes;
- To provide employees, distributors and customers information on the health or environmental effects of synthetic organic colorants and recommend appropriate protective measures to ensure their safe use, transportation and disposal;
- To operate all facilities in a manner that protects the environment and the health and safety of employees and the public;
- To promote research on the health, safety and environmental effects of its products, processes and waste materials;
- To cooperate with public authorities in establishing well-founded environmental, safety and health regulations; and

- To promote these principles of responsible care to others who produce, handle, use, transport or dispose of synthetic organic colorants.

The responsible care program shall fulfil, but not be limited to, the specific obligations described under paragraphs 2-5 below.

2. Product Safety Policy

It is the policy of ETAD members to take all reasonably practicable steps in order to ensure human and environmental safety in the use of the dyestuffs and organic pigments (synthetic organic colorants), manufactured or distributed by them. Members shall comply worldwide with all applicable laws and regulatory requirements dealing with the safety and the environmental impact of synthetic organic colorants.

ETAD recognizes that the legal requirements for hazard communication differ considerably in various regions where organic colorants are marketed. A primary objective of this Code of Ethics is to ensure that such differences do not deprive customers in countries with less stringent requirements of hazard information which is made available to their counterparts in countries with more comprehensive regulations. To achieve a common high standard of hazard communication ETAD members shall

- fully inform all customers about all known significant hazards;
- adopt policies to assure an equivalent level of hazard communication worldwide concerning their product.



3. Products Safety Information

3.1. Safety Data Sheets

Member companies shall ensure that for each of the synthetic organic colorants on their selling range, there is a safety data sheet with appropriate information content and that it is supplied to all customers.

3.2. Labeling

The EU regulations provide an appropriate basis for classification and labeling of organic colorants.

Where the laws of the country the products are sold to, require more stringent or mandate different labelling, the members shall adhere to such required or mandated labelling. In countries with less stringent requirements the labelling shall be in accordance with the EU system or an equivalent consistent with the policy of achieving a uniformly high standard of hazard communication.

3.3. Education and Awareness Programs

ETAD members shall endeavour to inform customers of the safe handling procedures best suited to the products involved.

4. Cessation of manufacture and sale of certain dyes

The manufacture and sale of dyes, which:

- are identified as hazardous by regulation or classification by expert bodies or
- contain certain hazardous impurities above specific limits

is incompatible with ETAD membership. These dyes are referred to in Annexes A and B.

5. UN Global Compact

Member companies shall also embrace, support and enact, within their sphere of influence, core values in the areas of human rights, labour standards, the environment and anti-corruption, as laid down in the UN Global Compact. Members have to register as a member of the UN Global Compact, or issuing an own binding Code of Conduct, embracing as a minimum the standards and values of the UN Global Compact.

6. Compliance

Member companies shall comply with the Code of Ethics and shall make every effort to ensure that their subsidiaries do so.

Annex A

Dyes or preparations of dyes used in textile and leather articles, which may come into direct and prolonged contact with the human skin or oral cavity.

These dyes:

- contain, or release by reductive cleavage of azo bonds to any of the specified amines*.
- contain any of the specified organic impurities*
- contain any of the specified trace metals*

Annex B

Individual Dyestuffs*

*The corresponding amines, trace metals, other organic impurities and dyes are listed with the applicable limit values in "Guidance to ETAD Member Companies on the Implementation of the Code of Ethics", Chap. 3.7, which is regularly updated to the current state of scientific knowledge.



Benefits of ETAD membership

Recognition

Recognized by regulatory authorities, customers, and the public as the authoritative source of information on health, safety, and environmental issues relating to organic colorants.

Representation

Represents interests of members and customers to government authorities, the media, other industries, public interest groups, organized labour, academia, and research/testing/consulting organizations.

Harmonization

Advocates, where regulations are necessary, a harmonization of the requirements, so that compliance costs are reduced.

Code of Ethics

Encourages members to adhere worldwide to a high ethical standard and promotes image of a responsible and safety-minded manufacturing industry.

Guidance

Provides guidance to ETAD member companies on interpretation of new regulatory requirements and recommends specific measures to implement the ETAD Code of Ethics.

Education and training

Develops and publishes education and training materials pertaining to organic colorants, e.g. for safe handling practices, product stewardship, and pollution prevention.

Research and testing

Cost-sharing of research and testing programs aimed at a better understanding of the health and environmental aspects of dyes and organic pigments.

Information

Responds to inquiries about the colorants' industry, provides information on topical issues and disseminates comments and position papers.

Database

Maintains and makes available to members a computerised database of literature pertaining to the health and environmental aspects of dyes.



ETAD member companies (status March 2018)

Archroma Management GmbH
Switzerland

ATUL Limited
India

BASF Colors & Effects GmbH
Germany

Cappelle Pigments n.v.
Belgium

Chroma Chemical Corp.
Taiwan, R.O.C.

**CHT Switzerland AG (formerly
BEZEMA Switzerland AG)**
Switzerland

CINIC Chemicals Co. Ltd.
China

Clariant International AG
Switzerland

Colourtex Industries Ltd.
India

**Dainichiseika Color
& Chemicals Mfg. Co., Ltd.**
Japan

DIC Corporation
Japan

**DyStar Colours Distribution
GmbH**
Germany

Everlight Chem. Industrial Corp.
Taiwan, R.O.C.

**Farbchemie Braun
GmbH & Co. KG**
Germany

Heubach GmbH
Germany

**Hubei Color Root
Technology Co., Ltd.**
China

Huntsman Textile Effects
Switzerland

**Hwa-Tai Industry Co., Ltd
(associate member)**
Thailand

Jay Chemical Industries Ltd.
India

M. Dohmen GmbH
Germany

Matex International Limited
Singapore

**Meghmani Dyes and
Intermediates Ltd.**
India

Nippon Kayaku Co., Ltd.
Japan

Oh Young Ind. Co. Ltd.
Korea

**Oriental Giant Dyes
& Chemical Ind. Corporation**
Taiwan, R.O.C.

Pidilite Industries Ltd.
India

Sensient Colors Inc.
USA

Setaş Kimya Sanayi A.Ş.
Turkey

Sudarshan Chemicals Ind. Ltd.
India

Sun Chemical A/S
Denmark

Synthesisia, a.s.
Czech Republic

T&T Industries Corporation
Taiwan, R.O.C.


TFL Ledertechnik GmbH
Germany

Thai Ambica Chemicals Co., Ltd.
Thailand

Toyocolor Co., Ltd.
Japan

Yorkshire Chemicals Ltd.
China

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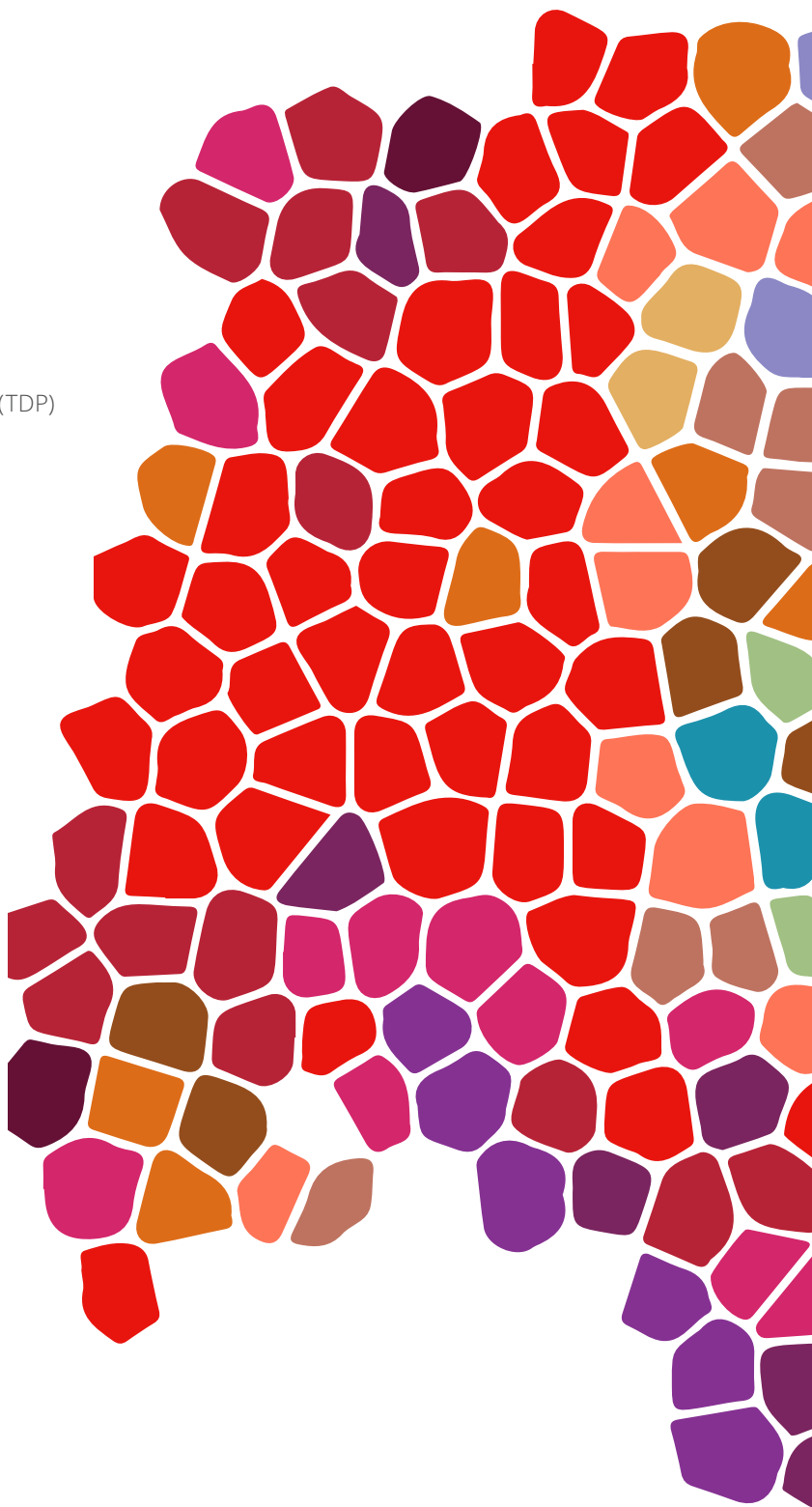
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ETAD

The Ecological
and Toxicological
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of Dyes
and Organic
Pigments
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